EXECUTIVE SUMMARY

The purpose of this *Technical Report* is to record the administration and reporting of the 2012-2013 Alaska Alternate Assessment.

The domains highlighted in this document, with examples of acceptable evidence, include: (a) academic content standards, (b) academic achievement standards, (c) a statewide assessment system, (d) validity, (e) reliability, and (f) other dimensions of technical quality. We address the areas of training, administration, scoring, and reporting related to the Alaska Alternate Assessment (AKAA). In addressing technical documentation, we first present content evidence, then reliability, then descriptive statistics and AYP calculations.

In the end, both procedural and empirical evidence support the claim that students with significant cognitive disabilities are assessed in a standardized system of reliable scoring and are achieving at various levels of proficiency on the AKAA.

Chapters 7 and 9 share the same set of appendices (Appendix 7.1 – 7.4). Chapter 8 includes strand, task, and item difficulty statistics within the body of the technical report.

In each appendix in chapters 7 and 9 (7.1 through 7.4), statistics are presented in the following order:

7.1 Reading
7.2 Writing
7.3 Mathematics
7.4 Science

In the first four appendices in Chapter 7, descriptive statistics are presented in this order:

AYP

- Participation descriptive statistics at the total test level for each grade or grade band
- Score descriptives for total tests for each subject, including the frequencies of each score (some tables were overly lengthy and were thus not included).

Test Strand Descriptive Statistics

- Test Strand descriptives for each subject in the lowest grade or grade band (i.e., grade 3 for grade band 3/4).
- Strand descriptives for each subject in the next lowest grade or grade band (i.e., grade 5 for grade band 5/6).

Task Item Descriptive Statistics

- Operational task descriptives for each subject in the lowest grade or grade band (i.e., grade 3 for grade band 3/4).
- Task descriptives (includes operational and field test items) for each subject in the lowest grade or grade band (i.e., grade 3 for grade band 3/4).
- Task item descriptives for each subject in the next lowest grade or grade band (i.e., grade 5 for grade band 5/6).

Reliability

- Item reliability for each subject in each grade band (i.e., grade 3/4).

This pattern continues until the highest grade or grade band (10 or 9/10). The subjects always appear in the following order: reading, writing, math, and science.

The AYP tables depict percentages of students participating, then the number of students at each score value, for the total sum in a subject area.

Strand, task, and item descriptive statistics tables depict the number of valid entries/items (N), the minimum and maximum values possible for items, the average score (Mean) and the average variation of scores around the mean (Standard Deviation).

The reliability section includes average values (Mean), the range of scores (Variation), average variation around the mean (Standard Deviation), and the number of items measured (N). Cronbach's alpha statistics also are presented.

CHAPTER 1: BACKGROUND OF THE ALASKA ALTERNATE ASSESSMENT

Overview

The 2012–2013 Alaska Alternate Assessment represented an equivalent form test to the 2010–2011 Alternate Assessment. This version of the assessment is referred to as "Form B."

History of Previous Program

In 2005, a Reliability and Validity study was conducted by Dr. Gerald Tindal which concluded that a need for revision to the State of Alaska's Student Portfolio system in order to meet technical quality requirements set by the No Child Left Behind legislation was required. As a result of the department's Request for Proposals process, Dillard Research Associates was awarded a contract to secure a standardized performance-task assessment for students with significant cognitive disabilities. To provide greater reliability in administration and scoring of the assessment, an online administrator-training program was developed. This online training program includes training and proficiency tests for each subject area. Secure tests were developed in accordance with the State of Alaska's Extended Grade Level Expectations (ExGLEs). Teams of content experts created Proficiency Level Descriptors (PLDs) .

Current Program Overview

Reasons for Current Approach

The current Alaska Alternate Assessment system was developed to meet the requirements of the No Child Left Behind Act of 2001; as described by the National Center on Education Outcomes (NCEO), alternate assessments are "tools used to evaluate the performance of students who are unable to participate in regular state assessments even with accommodations. Alternate assessments provide a mechanism for students with the most significant cognitive disabilities and for other students who may need alternate assessment formats to be included in the accountability system."

The AKAAs are standardized performance tasks administered and scored by Assessors who undergo a multi-step qualification process. Alaska's current system of assessing students with significant cognitive disabilities has been approved by the U.S. ED Title 1 Final Assessment System Peer Review process.

Roles of Contractor, Department, and Others

The contractor, Dillard Research Associates (DRA), serves the Alaska Department of Education and Early Development (EED) in developing, training, administering, scoring, and data reporting related to the alternate assessment based on alternate achievement standards (AA-AAS) for students with significant cognitive disabilities. These tasks are defined in greater detail in subsequent sections of this *Technical Report.*

The EED maintains authority to finalize all deliverable documents, training systems, and reports stemming from the AKAA system. The contractor works closely and collegially with personnel in EED's Assessment, Accountability, and Student Information office.

Summary of Current Program

Description of Program

The AKAAs are standardized performance tasks administered and scored by Assessors who undergo a multi-step qualification process. The AKAAs are administered to students with significant cognitive disabilities in grades 3-10 (grade bands 3-4, 5-6, 7-8, and 9-10) and measure student achievement in relation to the ExGLEs. All students are assessed in reading, writing, and mathematics. Students in grades 4, 8, and 10 are also assessed in science. The AKAAs focus on basic academic skills comprised of reading, writing, mathematics, and science tasks that are aligned with Alaska's ExGLEs.

The alternate assessments are comprised of the following components of a web-based training system that can be located at the following URL: http://ak.k12test.com

- Video-based training in each task
- Proficiency examinations
- Practice tests
- Secure test materials accessible only to qualified assessors during the test window
- A data entry and reporting portal
- A secure reporting site for district access to individual student reports

Description of Students Served

The AKAAs are administered to students with significant cognitive disabilities in grades 3-10 and measure student achievement in relation to the ExGLEs. Each student's Individual Education Program (IEP) team determines which assessment students in Alaska's Statewide Assessment Program will participate in, based upon criteria established by the EED.

The AKAAs focus on basic academic skills comprised of reading, writing, mathematics, and science tasks that relate to Alaska's ExGLEs. All eligible students are assessed in reading, writing, and mathematics. Students in grades 4, 8, and 10 are also assessed in science.

Description of How Scores Are Used

Assessors pre-enter their caseload of students into the online system. After administering the assessments one-on-one to a student, Assessors enter student scores directly into the online scoring and reporting system. An unofficial student report is immediately generated for the purpose of providing instructional feedback and guidance to IEP teams. Official student reports that have had the demographic information checked for accuracy and have been assigned proficiency levels were made available to districts on May 16, 2013 via the District Test Coordinators at the secure DRA Web Reporting System. These scores form the basis for Alaska's Adequate Yearly Progress (AYP) report for these students.

Any Standards-Based Assessment (SBA) and AKAA receiving a valid score in the content areas of reading, writing, math, and/or science will count toward overall participation and/or proficiency in the specific content area for AYP. Up to 1% of students attaining proficiency on the AKAA may count toward AYP proficiency per district.

Significant Changes Since Previous Technical Report

Improvements were made to several areas of the AKAA for the 2012-2013 testing window, including changes to face-to-face training and the online training website. The improvements and changes are detailed in Appendix 1.1.

Training and Continuous Improvement

- Developed additional training supports for Mentors around the Writing Scoring Manual
- Executed a Writing Scoring Accuracy Project for students in grade 5
- Completed a Reading Score-behind project targeting test administration with focused and open-ended questions in the domains of administration, scoring, and reporting for the AKAA in reading.

Appendix 1.1 Web Changes Handout

Organization of Technical Report

The 2013 *Technical Report* is organized around ten broad topics, with detailed appendices referenced where appropriate. The *Technical Report* serves as a narrative description of the activities and results of the 2012-2013 testing year. The appendices provide all reference materials, including training agendas, guidance documents, and complete statistical analyses on a variety of required reporting topics.

The topics of the *Technical Report* are:

1. Background of the Alaska Alternate Assessment
2. Test Design and Item/Task Development
3. Test Administration Procedures
4. Scoring
5. Standards Validation
6. Reporting
7. Test Validity
8. Descriptive Statistics
9. Adequate Yearly Progress (AYP)
10. Recommended Program Improvements

In all sections where subject area results are reported or described, the *Technical Report* standardizes the reporting order to: Reading, Writing, Mathematics, and Science.

CHAPTER 2: TEST DESIGN AND ITEM/TASK DEVELOPMENT

Overview

The NCEO describes alternate assessments as "tools used to evaluate the performance of students who are unable to participate in regular state assessments even with accommodations. Alternate assessments provide a mechanism for students with the most significant cognitive disabilities and for other students who may need alternate assessment formats to be included in the accountability system." http://www.cehd.umn.edu/NCEO/TopicAreas/AlternateAssessments/altAssessTopic.htm

The need for developing alternate assessments was in line with the requirements of the Goals 2000 and Improving America's Schools Act (IASA), the Individuals with Disabilities Education Act of 1997 (IDEA), and the IDEA reauthorization in 2004, as well as Alaska's Quality Schools Initiative (QSI), which supported high standards, statewide assessments, and improved results for all students. Until mandated by the federal government, most students with significant cognitive disabilities, and other students with disabilities, were not included in district or state assessment systems. Alternate assessments are not typical large-scale assessments, nor are they individualized diagnostic tools. However, the goal is to provide information and accountability for the academic performance of all students in a school district.

The original design of the AKAA, a student portfolio, was intended to provide an accountability measure that was consistent with state standards, individualized, performance-based, used independent and reliable scoring, and integrated with curriculum and the student's IEP. Students were assessed in language arts, mathematics, and skills for a healthy life. The portfolio assessment was very time-consuming for teachers, and teachers often felt that the portfolio measured their ability to construct a portfolio rather than what a student was learning. However, many of the purposes of this first alternate assessment were met. Students were included in the state's comprehensive system of student assessment; student IEPs used academic content standards as goals; students were assessed on academic progress; and, students were included in general education classrooms on a more frequent basis.

After conducting a reliability and validity study, Alaska moved to a performance task assessment that focused on measuring reading, writing, mathematics, and science. The current AKAA uses performance tasks to measure what a student knows and can do in those four core subject areas. The state felt that an assessment with performance tasks offered a more standardized assessment with high technical quality (reliability and validity). Generally, surveys of teachers indicate a greater overall satisfaction with the performance task assessment.

Description of ExGLEs and their relationship to GLEs

In 1993, the EED developed content standards in English, mathematics, science, geography, history, skills for a healthy life, government and citizenship, fine arts, technology, and world languages. The content standards were broad statements of what students should know and be able to do as a result of their public school experience. A revised edition included content standards for employability, library information/literacy, and cultural standards for students. These content standards are discussed in this document as Grade Level Expectations (GLEs).

In 1999, the Alaska State Board of Education adopted extended performance standards for students with significant cognitive disabilities in the content areas of English/language arts, math, and skills for a healthy life. The reason for developing extended performance standards was to allow for variation in the demonstration of skills across ages and abilities. Different content standards were assigned to, and assessed at, different grade levels.

In response to the 2001 No Child Left Behind legislation, a third edition of the Alaska content standards booklet includes expanded performance standards organized by grade band, called ExGLEs, and revised science content standards and science extended performance standards by grade band. A fourth publication included Alaska history standards.

The No Child Left Behind legislation also required that if a state used AA-AAS's for students with significant cognitive disabilities, "the assessment materials should show a clear link to the content standards for the grade in which the student is enrolled although the grade-level content may be reduced in complexity or modified to reflect pre-requisite skills." In response to this section, the Alaska EED began the process of developing ExGLEs and Performance Level Descriptors (PLDs).

The ExGLEs are an interpretation of the content standards that should be taught and learned within each grade level. The content is reduced in complexity to provide entry points to the GLEs, while still providing challenging academic expectations for students with significant cognitive disabilities.

Test Specifications and Blueprint

Description of Test Specifications (DOTS)

Descriptions of Test Specifications for the 2012–2013 Alternate Assessment are Excel spreadsheets that define all aspects of each item used in all test materials. In addition to items used in the 2012–2013 assessments, information related to all items used in tests beginning with the 2007–2008 test materials are displayed. Information includes the strand name, the number of answer options, maximum score points, item depth of knowledge (DOK), whether the item was an operational or field test item, and statistical data for each item (mean, standard deviation), a statistical analysis of the difficulty of the item (the mean points for each item divided by the maximum points available), and the task weight.

The DOTS documents for reading, writing, mathematics and science contain confidential secure test information and are not available to the public.

Process of Establishing Test Specifications

The test specifications included the following variables as items were developed:

Grade Level – All items were written to appropriate grade bands: 3-4, 5-6, 7-8, 9-10.

Subject – All items were written within specific subject area domains: Reading, Writing, Mathematics, and Science.

Strand Name: All items were written to fit within subject domains.

Extended Grade Level Expectation: These expectations within a content area were organized in content strands and used to organize item writing.

Item Prompt: Each item included specific wording for the teacher to use in test administration.

Item Type: Both selected and constructed-response items were considered with the vast majority of items using selection responses so that students with physical limitations could participate (respond).

Item Answer: Each item was constructed with three options if using a selection type response or an area for the student to construct a response.

Bias / Content Panel Judgment: Committee members rated each cousin item as Easy (E), Medium (M) or Hard (H) for students taking the Alaska Alternate Assessment.

Item Depth of Knowledge:

Level 1 Rote memory, recall, simple procedure, or apply a one-step, well-defined algorithmic procedure (identify, recall, recognize, use, measure).

Level 2 Some mental processing beyond habitual response. Decisions in how to approach a problem (classify, organize, estimate, display data, compare data).

Level 3 Reasoning, planning, using evidence -- complex and abstract (draw conclusions, cite evidence, explain in terms of concepts, decide which concepts to apply to solve a complex problem). More than one answer, and student has to justify their response.

Level 4 Complex reasoning, planning, developing and thinking, most likely over an extended period of time, plus applying significant conceptual understanding and higher-order thinking. Make several connections (relate ideas within the content area or among content areas, and select one approach among many alternatives to solve the problem). Design and conduct experiments and projects, develop and prove conjectures, make connections, combine and synthesize ideas into new concepts, critique experimental designs.

Item Content Test Blueprint and Item Specifications

Test construction for the 2013 testing window was designed to closely match the Form B test administered in 2011. The percent of the strands represented in each subject area and at each grade band are displayed in the appendix.

Appendix 2.1 Strands and Weights: Reading, Writing, Mathematics, and Science

Linear Equating

The Reading, Writing, and Mathematics AKAAs had significant changes from 05-06 to this year, and the scores are calculated between the two to reach established standard setting cut scores. The point totals of the 2005-2006 assessments available within each strand were established as the original year. Point totals within each strand in the 2009-10 assessments were compared to the original year, and a weighting factor calculated.

For instance, assume the 2006 strand 1.34 Numeration totaled 30 possible points and the point total in the same strand for the 2013 test totaled 28, the weighting factor would be 1.07.

Because the science test was first employed in 2008-2009 and is not based on the 2005-2006 assessment (and the number of points available are the same from 08-09 to 11-12), the Science AKAA did not need to undergo linear equating. See *Appendix 2.1 Strands and Weights: Reading, Writing, Mathematics, and Science*.

Proficiency Level Descriptor Development

Prior to the adoption of the new AKAA, the extended performance standards needed to be revised to reflect the change in the general education academic standards. The existing proficiency level descriptors for the Alternate Assessment Portfolio were universal descriptors. The department assembled teams of content and special education experts, as well as other stakeholders, for the purpose of developing Extended Grade Level Expectations (ExGLEs) for the grade bands 3-4, 5-6, 7-8 and 9-10, and grade-banded Proficiency Level Descriptors based on alternate achievement standards (PLDs) for students with significant cognitive disabilities. The Official Individual Student Reports (ISRs) contain the definitions and descriptions for each proficiency level and at each grade level for each subject area Alaska Alternate Assessment.

Appendix 2.2 Proficiency Level Descriptors

Cut Scores

A standard-setting committee determined cut scores for the new alternate assessment and used the PLDs during that process. During standard setting, the PLDs were revised and were formally adopted by the State Board of Education in July 2007 (reading, writing, and mathematics) and in July 2008 (science). To obtain a proficiency level of advanced, proficient, below proficient, or far below proficient in reading, writing, and mathematics on the Alaska Alternate Assessment, a student must obtain a score as set out in the following tables:

Reading Proficiency Level	Grade 3 & 4	Grade 5 & 6	Grade 7 & 8	Grade 9 & 10
Advanced	63 or above	77 or above	52 or above	57 or above
Proficient	32-62	46-76	33-51	43-56
Below Proficient	8-31	11-45	12-32	22-42
Far Below Proficient	7 or below	10 or below	11 or below	21 or below

Writing Proficiency Level	Grade 3 & 4	Grade 5 & 6	Grade 7 & 8	Grade 9 & 10
Advanced	76 or above	67 or above	76 or above	82 or above
Proficient	38-75	33-66	41-75	47-81
Below Proficient	7-37	10-32	16-40	24-46
Far Below Proficient	6 or below	9 or below	15 or below	23 or below

Mathematics Proficiency Level	Grade 3 & 4	Grade 5 & 6	Grade 7 & 8	Grade 9 & 10
Advanced	62 or above	61 or above	74 or above	81 or above
Proficient	33-61	25-60	52-73	63-80
Below Proficient	6-32	8-24	22-51	24-62
Far Below Proficient	5 or below	7 or below	21 or below	23 or below

Science Proficiency Level	Grade 4	Grade 8	Grade 10
Advanced	44 or above	44 or above	44 or above
Proficient	24 - 43	29 - 43	26 – 43
Below Proficient	12 - 23	16 - 28	18 – 25
Far Below Proficient	11 or below	15 or below	17 or below

In addition to the cut scores established above, EED also determines AYP for English language arts (ELA) using a combined Reading and Writing score. The lowest possible proficient scores in each category are added together to form the ELA cut score. There are two performance levels, Above or Below, as shown below:

ELA Proficiency Level	Grade 3 & 4	Grade 5 & 6	Grade 7 & 8	Grade 9 & 10
Above	70 or above	79 or above	74 or above	90 or above
Below	69 or below	78 or below	73 or below	89 or below

Item/Task Development

Item Writing, including Scoring Guides

A robust set of field test items were designed in 2009-2010 and underwent Content and Bias Review; no new items were written for the 2013 test window. The 2012-2013 AKAA test documents matched the test documents deployed in 2010-2011, and are referred to as "Form B."

The training for scoring writing samples was enhanced for the 2013 test window with the development of a Writing Scoring Addendum document to supplement the Writing Scoring Manual published in 2011-2012.

Appendix 2.3 Writing Training Documents

Expanded Levels of Support (ELOS)

Between June and September 2012, the ELOS test documents were substantially improved. Previously, one set of documents covered the ELOS administration for all four grade bands in reading, writing, mathematics and science, respectively. In the spring of 2012, new ELOS assessments were developed at each grade band separately, each composed of three tasks with five items that must all be administered. Within each task, the five items are ordered to provide an attention item, an interaction item, an easy item, a medium item and a hard item. The test documents used in 2013 have been revised such that all items are in order of difficulty based not only upon theory, but also item statistics from the 2012 administration.

Assessors rate the level of support needed to bring the student to success on a 4-pt scale (1 = full physical support, 2 = partial physical support, 3 = visual, verbal, and/or gestural prompts, 4 = student completes task independently).

Reduction in Complexity, Depth, and Breadth

Due to the federal regulations provided in December 2003, steps were taken to increase the cognitive accessibility of items. This was done by analyzing and removing potential barriers for students with significant cognitive disabilities. This process was used in the development of items and for both administration and scoring and student materials. Simplified language was used in all text. Alignment was ensured between teacher-scripted language and student materials. General test layout was considered from the view of readability and legibility. Specific administration directions were limited to a single page of the Scoring Protocol for ease of administration. Pictures were constructed using primarily black and white for minimal complexity. All items were reviewed with administration and development steps toward reducing complexity.

Reductions in depth, which is generally defined by Anderson's revision of *Bloom's Taxonomy*, were accomplished by limiting the process verbs to simpler tasks (recognize, identify, match, understand *versus* analyze, develop, evaluate, create). The team developed items that linked to the relevant ExGLEs in reading, writing, mathematics, and science at the grades tested. From that point, the teams tried to target performance events that were reduced in terms of depth, but maintained access to appropriate content.

Reductions in breadth, which can be defined in terms of how broad a student's domain of knowledge must be to answer a specific item, were accomplished by limiting the item content to accessible domains. For example, while a general education assessment might target the process of implementing a laboratory experiment in science, the alternate assessment might ask the student to define a term that is critical to the experiment. The content is relevant, but the performance demand does not require a wide knowledge set to answer appropriately.

Reductions in complexity, which is generally how difficult the test content is, were accomplished by limiting the difficulty of the content (e.g., adding single-digit integers is much easier than adding imaginary numbers, though the process verb, "to add", is the same). Language load was also analyzed and decreased in order to increase accessibility using the *Linguistic Complexity Rubric for Universal Design* (Instrument 1).

It is critical to mention that depth, breadth, and complexity are intertwined and work together to determine overall item difficulty. They are simply three lenses used to systematically address and make items more accessible from a test content perspective.

As mentioned, tasks and items were developed based on a one-to-one correspondence with the ExGLEs. All strands and attributes were equally addressed in accordance to proportion of points for each task. The total points for each test was fixed at 100 points to allow proficiency standards from the first year to be comparable to the second year of testing. Weighting was needed and an algorithm was used to equalize the differential points across strands/attributes.

Depth-of-knowledge (DOK) was judged in the analysis of the Alaska Alternate Assessment. An alignment study was conducted in 2007 by Karvenon and Almond; the information was used to guide item adaptations for the 2007-2008 secure test items. Categorical concurrence, range of knowledge, and balance of representation were defined originally by Webb, and adapted by Dr. Tindal for use with students with significant cognitive disabilities, and then defined based on operational use within the Alaska Alignment Study.

The ELOS items developed last year employed a similar approach, yet tasks and items were developed based on a one-to-one correspondence primarily with the Early Entry Points (EEPs), which are the prerequisite skills a student needs to access the ExGLEs. At the high school level, some ELOS items were developed with a one-to-one correspondence with the ExGLEs in order to provide for an increased range of difficulty as students progress through the grade bands.

Bias and Sensitivity Review

A bias and sensitivity review of the new test items was conducted in November 2007. During this process, reviewers examined the bias of the assessment and if the format would affect student performance. A group of 12 participants from Alaska and two specialists with the deaf and blind community from Oregon were selected to review all items. All reviewers were given examples to focus on during the review and all held Qualified Assessor certificates and certification in special education. Items were updated based on the results of this review prior to the 2007-2008 testing window. Bias and sensitivity were analyzed for all items using the *Bias and Sensitivity Review Checklist* (Instrument 2). Items were either adapted to meet the groups concerns or not utilized on the assessment based upon the results garnered.

A second Bias and Content Committee was convened in September 2009 to analyze cousin items, a pool of new, related items to the existing items in the Alaska Alternate Assessment. The results of this analysis are indicated in the DOTS document.

Appendix 2.4 Linguistic Complexity & Bias and Sensitivity Review

Test Design and Development

Representation and Functionality

The 2009-2010 cousin items reflected minimal construct under-representation or construct irrelevant variance (CIV) to ensure functionality.

- Select the most appropriate word with the least number of syllables
- Reduce number of words used in items, directions, and passages
- Use independent clause structure instead of dependent clause structure in passages
- Develop prompts with minimal wording
- Ensure more opportunities for modeling
- Provide examples when possible
- Create clear (not tricky) distractors
- Provide explicit textual information with reduced requirements for extended inference
- Provide rules rather than exceptions
- Use careful sequencing so that potentially similar/confusing information is not presented
- Place items adjacent to similar information
- Provide multiple choice options for items when possible or appropriate for item construction

Rasch equating was used to ensure functionality by calculating fit statistics that reflect the degree to which ability and difficulty are mapping correctly.

Psychometric Guidelines for Selecting Items/Tasks for Item/Task Bank

Traditional guidelines were used for selecting items and tasks that rely on reliability coefficients but also on implementation in the field. As described in other sections of this report, extensive training of new and returning Qualified Assessors and Mentors was conducted before the testing window opened; in addition, web-based training and proficiency assessments were completed with actual practice in the field required.

We calculated both the mean and standard deviation for each item to ensure the item was functional for a wide range of students.

The entire item bank was developed with all items from the original test completed in 2006-2007 and every year after that to identify common items and use them as anchors for calibrating item values using a Rasch Partial Credit Model.

Item Bank Summary

All items that have been used in any version of the Alaska Alternate Assessment, beginning with SY 2006, have been included in the 2013 DOTS, due to be released to EED in November 2013. Student performance on each item is recorded for each year the item was in use. The DOTS is the item bank.

Current Test Construction

The 2008-2009 AKAA served as the baseline document for developing two forms; items included in this version are referred to as operational items. Test items in Form A (2009-2010) were developed by identifying the strand, task, and construct for each operational item and locating matching cousin items for each. This system allowed DRA to conduct statistical analysis on the operational items, on the field test items, and equivalent test form analysis. Beginning with testing year 2012-2013, all items in the current item bank are considered operational items.

Construction of the Operational Forms

Approximately one-half of the 2008-2009 test items (operational items) were replaced by matching cousin items (field test items). Operational items are items that have been used (without modification) in the 2007–2008 and 2008–2009 assessments, and thus have two years of statistical data collected for each item. Field test items were carefully created to match the operational items they would replace.

All test items for 2012-2013 (Form A) are operational items.

In 2009, DRA and EED constructed a plan that would allow a minimum of six versions of the AKAA:

1) AKAA Test (2007-2008, 2008-2009)
2) 1/2 (a) AKAA test + 1/2 (a) FT (FORM A, 2009-2010)
3) 1/2 (b) AKAA test + 1/2 (b) FT (FORM B, 2010-2011)
4) 1/2 (a) AKAA test + 1/2 (b) FT
5) 1/2 (b) AKAA test + 1/2 (a) FT
6) 1/2 (a) FT + 1/2 (b) FT

However, because EED joined a General Supervision Enhancement Grant (GSEG) consortium of states working to create alternate assessments, DRA and EED have agreed to maintain the current two forms of the AKAA (Form A and Form B, numbers 2 and 3 above) for the future, until such time as the General Supervision Enhancement Grant (GSEG) assessment is developed and ready to be deployed.

1) Form A, 2011-2012 and 2013-2014 (described in #2 above)
2) Form B, 2012-2013 (described in #3 above)

Test Development Timeline

At the conclusion of the first six-year contract with EED on June 30, 2011, DRA had developed and produced two complete forms of the AKAA. Both forms have approximately the same number of tasks and items and represent similar content standards and strands. In addition, a new ELOS test was developed, and implemented in the 2012 test year.

The new six-year contract, representing 2011-2017, was established as a maintenance contract, with no new test items to be developed.

Possible Future Test Construction

Psychometric Guidelines for Constructing Future Forms

In 2010-2011, DRA conducted an analysis of item functioning in anticipation of reconstructing the AKAAs into equally-weighted tests, in order to eliminate the need for linear equating of scores. However, in light of Alaska's involvement in a General Supervision Enhancement Grant (GSEG) consortium, both EED and DRA agreed to continue use of the current Form A and Form B test documents in anticipation of a new test design produced by the GSEG, as described in the previous pages. The following information is included as a reminder of the analyses that were conducted.

Possible Psychometric Guidelines for Constructing Future Forms

Coverage of Strands (and equal weighting) was used to ensure appropriate and consistent representation of items to strands within each subject area and grade level.

Two forms were developed with 2009-2010 – Form A (where we used half of the items from previous years to serve as anchored operational items and developed cousin items for the other half of the test) and the 2010-2011 – Form B (where we again used half of the items from previous years to serve as anchored operational items and developed cousin items for the other half of the test). In all tests, the cousin items were embedded in the actual test but only the operational items were used to calculate Adequate Yearly Progress (AYP).

During the summer of 2011, all items were calibrated to a common scale across years using a Rasch Partial Credit Model (RPCM). The results of the scaling analysis provided information on all item difficulties and functioning. This information can be used to construct alternate forms of equivalent difficulty. During the scaling analysis, all tests were equated between successive years with a nonequivalent group with anchor test (NEAT) design. Our intent was to produce item calibrations for the 2009-2010 (Form A) and 2010-2011 (Form B) forms that were equated to the original year of each subject's testing– the first year the test was administered. We used a chained equating method to link items between multiple years. Our method comprised the following steps:

- Calibrate all items in the original year with a RPCM model
- Identify common items between original and subsequent years
- Calibrate subsequent years while anchoring common item difficulties and step values to the original calibrations

When equating item calibrations in 2009-2010 and 2010-2011 to the original year scale, we used any and all common items across years as anchor items, anchoring common items

between adjacent years and from previous years. This process allowed more items to be anchored, which ultimately should reduce the equating error.

Table 1 displays the original year for each subject and grade. Following Table 1 is a description of the common item-anchoring plan for the two different original years.

Table 1 Original Equating Year by Subject and Grade

Original	Reading	Writing	Math	Science
Grade 3-4	2006-2007	2006-2007	2006-2007	2007-2009
Grade 5-6	2006-2007	2006-2007	2006-2007	2007-2009
Grade 7-8	2006-2007	2006-2007	2006-2007	2007-2009
Grade 9-10	2006-2007	2006-2007	2006-2007	2007-2009

Original Test Year 2006-2007. Items were first calibrated with a RPCM during 2006-2007, the original year for determining linear equating in future years. After calibration, common items between 2006-2007 and 2007-2009 were identified (the same test had been used for two successive years). The 2007-2009 items were then calibrated with the common item difficulty and step values anchored to the 2006-2007 calibrations, which adjusted the calibration of the freely estimated 2007-2009 items *relative to* the 2006-2007 values. In 2009-2010 common items were identified between 2006-2007 and 2009-2010, *and* 2007-2009 and 2009-2010. The 2009-2010 items were then calibrated with the common item difficulty and step values anchored to the values from the year in which they originally appeared (either 2006-2007 or 2007-2009). In 2010-2012 common items were identified between 2006-2007, 2007-2009 and 2010-2012, and 2009-2010 and 2010-2012. The 2010-2012 items were then calibrated with the common item difficulty and step values anchored to the values from the year in which they originally appeared (either 2006-2007, 2007-2009, or 2009-2010).

Original Test Years 2007-2009. Because science was not a required for the Alaska assessment prior to 2007, the original years for these assessments were 2007-2009. After the initial calibration for the 2007-2009 years, common items were identified between 2007-2009 and 2009-2010. The 2009-2010 items were then calibrated with the common item difficulty and step values anchored to the 2007-2009 calibrations. In 2010-2012 common items were identified between 2007-2009 and 2009-2010, and 2010-2012. The 2010-2012 items were then calibrated with the common item difficulty and step values anchored to the values from the year in which they originally appeared (either 2007-2009 or 2009-2010).

Essentially equivalent items. When the original year was 2006-2007, there were occasionally no common items between the 2006-2007 version of the test and the 2007-2008 version of the test. Yet, our intent was to equate items to the original year, 2006-2007. If no common items existed between 2006-2007 and 2007-2008, we identified *essentially equivalent* items. For example, in the following two tasks, the items from 2006-2007 and 2010-2012 consisted of copying letter names; we simply associated items with

each other without exact matching of each specific letter with itself across the two time periods.

2006-2007

Item	Letter	Student Response	Points
1	g		/2
2	t		/2
3	k		/2
4	a		/2
5	m		/2
6	B		/2
7	C		/2
8	W		/2
9	I		/2
10	Z		/2

2010-2011

1.34A - Copy Letters - Scoring

Item	Letter	Student Response	Points
1	c		/2
2	f		/2
3	h		/2
4	z		/2
5	w		/2
6	L		/2
7	U		/2
8	J		/2
9	Y		/2
10	V		/2
11	G		/2

Within Appendix 2.5, Tables 1-6 present the "equating map" used for reading by grade-band, Tables 7-10 present the same equating map for writing, Tables 11-14 present the map for math, and Tables 15-16 present the map for science. When viewing the tables, each row represents a unique item. When the item was presented in multiple years, its variable label appears in each year. The column containing the words "recode" indicates the way the scoring was recoded and was left blank if no recoding was deemed necessary. *Essentially equivalent* items are displayed in bold-faced font.

Appendix 2.5 2010-11 Equating Map

Data Preparation

Five years of Alaska Alternate Assessment data were prepared for the equating analysis (using the RPCM methodology described above) with data prepared in a similar format for all grade-bands and for all content areas. A number of steps were consistently applied across the subject areas and grade levels that involved cleaning up the data file to exclude missing fields (values) for virtually all items for a small group of students, data aggregation to prepare master files for analysis, and item recoding for ensuring similar scales.

Systematic deletion of non-responders

The AKAAs contain discontinuation rules for students who are not responding to items aligned with the ExGLEs. The discontinuation rules state that if a student scores a zero on three items within a task, the remainder of the task should be discontinued and the tester should go on to the next task. If the discontinuation rules are exercised for three consecutive tasks, the test as a whole should be discontinued. The student subsequently is administered the appropriate set of ELOS tasks/items. These rules were in place in the beginning of the 2007-2008 school year.

Data Aggregation

The alternate assessments were identical for all content areas (reading, writing, math, and science) during the 2007-2008 and 2008-2009 school years. All items were presented in the same format, in the same order, and with the same administration procedures. When applying item response models, such as the Rasch model, larger sample sizes are desirable, as the error associated with each item and person estimate included in the analysis are

reduced. Given the identical design of the assessments between 2007-2008 and 2008-2009, and the need for large sample sizes, all item response data were combined between these two years, creating a single "2007-2009" data file.

Item Score Recoding

There were four reasons that items occasionally needed to be recoded when the item included: (a) a large number of potential scoring options, (b) inconsistent scoring between years for common items, (c) inconsistent item scoring, or (d) missing step values.

In some content areas, particularly writing, a large amount of score reporting options were available. For example, one writing item in grade-band 9/10 had possible scores ranging from 0-35. When such a large number of scores were possible, it became difficult to estimate the step calibrations because very few students received each possible score. When a large number of scores were possible, the item was recoded into a narrower band of values. For example, the aforementioned 35-point item was recoded to a 7-point scale, with the score options categorized into five 6-point interval ranges and one 5-point interval range (i.e., 0 = 0, 1-6 = 1, 7-12 = 2, 13-18 = 3, 19-24 = 4, 25-30 = 5, and 31-35 = 6).

In other instances, the item scoring changed between years, although the item itself did not change. For example, an item may have been scored dichotomously, 0-1, in one year but then given a partial credit rating, 0-1-2, in the next. If the scoring changed on a common item that needed to be anchored, the items needed to be recoded so they would have identical scoring algorithms. For example, if an item was scored 0-1 in 2006-2007, but 0-1-2 in 2007-2009, the difficulty and step values would be anchored only to the 0-1 values for the 2007-2009 analysis. The model would then not expect students to score a 2 on the item, given that the maximum score on the anchored value is a 1. If these steps had not been employed, estimates on all items would have become skewed.

Occasionally, items had inconsistent scoring protocols. For example, most 6-value scale items in the 2007-2009 version of the test were scored 0-1-2-3-4-5, but one was instead scored 0-5-10-15-20-25. The different scoring for the one item resulted in the item being differentially weighted. All estimates in a Rasch model are based on the total sum score of the test items. If one item contributes more to the sum score, then it is weighted more heavily in the calibrations. Further, a partial credit model assumes there are no empty steps (e.g., the partial credit model would assume that 1-4 were possible score values). All items with inconsistent scoring algorithms were recoded to match the rest of the data.

Finally, on occasion there were items with missing step values. That is, while the item was intended to be scored 0-1-2, only the values of 0 and 2 were present. In these instances, items were recoded to the least condensed scale possible. For example, if an item was intended to be scored 0-1-2-3-4-5, but only had valid responses in the 0-1-2-3-5 categories, the item would be recoded to 0-1-2-3-4. Items were always recoded to have consistent scoring throughout all five years of the data. The recoding schemes of all items are reported in the equating maps (Tables 2-17 in Appendix 2.6).

Internal Review of the Items and Forms

DRA maintains iterative internal and external quality assurance procedures and reviews protocols designed to eliminate errors in content, grammar, and formatting, and to improve document retrieval and sharing by assigning document-naming protocols to all documents. These protocols are described in the appendix.

Appendix 2.6 DRA 2012-13 Quality Assurance Manual

CHAPTER 3: TEST ADMINISTRATION PROCEDURES

Overview

The AKAA is administered by trained Qualified Assessors, following a standardized scoring protocol. The assessment is administered individually to qualifying students and is scored at the time of administration by the Assessor.

Student Population Tested

This test is reserved for students with significant cognitive disabilities. Individualized Educational Program (IEP) teams make a determination whether a student is eligible to take the Alaska Alternate Assessment by following the guidelines in Alaska's Participation Guidelines for Alaska Students in State Assessments, June 2012 edition, located on pages 26-27
at: http://www.eed.state.ak.us/tls/assessment/pdf_files/ParticipationGuidelinesWeb_2012.pdf

Standard Administration With or Without Accommodations

The Alaska Alternate Assessments in reading, writing, mathematics, and science are comprised of Standard test items and Expanded Levels of Support (ELOS) test items. The standard test administration uses standardized test items, student materials, and delivery instructions. The ELOS test items offer increased support and flexibility. The ELOS items are available for students who meet the criteria that are explained below. Every year, ALL students who are eligible for the Alaska Alternate Assessment must begin with the administration of the standard test tasks and items for the student's grade level. The students may use accommodations/assistive technology during testing.

Grade Level Assessments

The AKAAs for reading, writing, and mathematics are administered in grade brands: students in grades 3 and 4 take the 3/4 tests; students in grades 5 and 6 take the 5/6 tests; students in grades 7 and 8 take the 7/8 tests; and students in grades 9 and 10 take the 9/10 test. The AKAA in science is administered in grades 4, 8, and 10. Selecting the correct grade level assessment is critical as the scores for students testing in the incorrect grade level are invalidated. For students on the non-diploma alternate assessment track, there are no tests administered after grade 10. The AKAA is the alternate assessment for both the Standards Based Assessments and the Terra Nova.

Including Student Participation and Performance

Students taking the AKAAs (including ELOS) can be counted in their school and district for Adequate Yearly Progress (AYP) in the areas of performance and participation. Individual student scores are calculated and assigned a proficiency level: Advanced, Proficient, Below Proficient, or Far Below Proficient. The ELOS items receive scores, but the proficiency level is Far Below Proficient. All students receive individual student reports.

Standard Test Administration

The intent of administering the standard test items first is to provide an opportunity for each student to show what they know and can do in the grade level skills reflected in the standard administration of the AKAA. However, if a student is non-responsive, refuses to answer, or consistently earns zero scores (following the three-task, three-item rule described below), the standard administration should be stopped and the assessor must administer the Expanded Levels of Support (ELOS) test items. The purpose of stopping the standard test administration is to avoid having to administer the entire test to students who are not yet able to demonstrate skills at that level.

Standard Test Administration with Accommodations

The AKAA allows for accommodations to be utilized during test administration. Accommodations for the student are determined by the student's IEP team. The Participation Guidelines recommends that an accommodation should be used in the classroom for at least three months prior to testing. This timeline is a suggestion. It is important that the student have practice with the accommodation prior to testing; how much practice will differ by student. This amount of time allows the student to become familiar with the accommodation and ensures that the accommodation is appropriate for the student.

Standard Administration With or Without Accommodations AND Then Switched to the ELOS

The purpose of ELOS items is to provide access to the grade level tests for all students, even those who struggle with the standard alternate assessment test items. The focus of the ELOS is on students who have very limited or emerging systems of communication (e.g., may look at a speaker when her name is called, may indicate choice between activities, may have very early pre-skills for academic areas, etc.).

In each content area the Assessor must administer a minimum of three tasks and three items within each task. For each of the minimum three tasks, the student must be presented with at least three items in the task before moving on to the next task. When the student scores zeros on three consecutive items in three consecutive tasks, the Assessor should stop the assessment for that content area and must administer the required number of ELOS test items.

The three task-three item rule is operationalized as follows:

Start with Task 1 of the standard administration of the alternate assessment and proceed with successive tasks. Generally, the early tasks in each content area are easier, and tasks become progressively more difficult.

- Task 1-The assessor engages the student with the first item on a task and enters a score of zero if the student has (a) no interactive behaviors or no response, (b) actively refuses to engage in the activity, or (c) gives an incorrect answer. Next, the assessor presents the second item and enters a score of zero if the student has (a) no interactive behaviors or no response, (b) actively refuses to engage in the

activity, or (c) gives an incorrect answer. Finally, the assessor moves to the third item and enters a score of zero if there is no response, the student refuses, or the student gives an incorrect answer.

- Task 2-The assessor then administers the next set of items and enters a score of zero if again there is no response, the student refuses, or the student gives an incorrect answer. When there are zeros for three consecutive items in task two, the assessor stops administering items in this task and moves to the next task.

- Task 3-Finally, the Assessor administers the next set of items and enters a score of zero if again there is no response, the student refuses, or the student gives an incorrect answer. When there are zeros for three consecutive items in task three, the assessor stops administering items in this task, and the Assessor stops the standard assessment in this content area. The Assessor must now administer the ELOS items in this content area. ELOS items may be administered immediately to complete the assessment for this content area, or at a later time.

- When a Task or Tasks have fewer than three items, Assessors are instructed to interpret the 3 X 3 rule to mean "nine consecutive zeros across a minimum of three tasks."

ELOS Administration

The ELOS test items progress from simple to more difficult items within each of three tasks. Each ELOS task has five items. Assessors must present all fifteen items to the student. Students are scored based on the level of support needed to bring them to success on the item.

Accommodations

The AKAA allows accommodations to be utilized during test administration. Accommodations for each student are determined by the student's IEP team.

Accommodations fall into the following categories:

- **Timing/Scheduling** (e.g., extended time, frequent breaks, etc.)
- **Setting** (e.g., study carrel, student's home, separate room, etc.)
- **Presentation** (e.g., repeat directions, read aloud, large print, Braille, etc.)
    - Included with Presentation is **Assistive Devices/Supports** (e.g., calculator, amplification equipment, manipulatives, etc.)
- **Response** (e.g., mark answers in book, scribe records response, point, use an assistive device, etc.)

The Participation Guidelines recommends that an accommodation should be used in the classroom for at least three months prior to testing. This timeline is a suggestion. It is important that the student have practice with the accommodation prior to testing; how much practice will differ by student. This amount of time allows the student to become familiar with the accommodation and ensures that the accommodation is appropriate for the student. A participation guideline is available on the EED website at: http://www.eed.state.ak.us/tls/assessment/pdf_files/ParticipationGuidelinesWeb_2012.pdf

Test Administrators

Only school personnel may administer the AKAA. This includes both teachers and paraprofessionals. In order to become a Qualified Assessor (QA), individuals must participate in online training, pass proficiency tests, and administer a practice assessment that is then reviewed by their Qualified Mentor-Trainer (QT). Each QT must go through this same training, as well as additional in-person training provided annually by the EED and DRA, in order to serve as a valuable resource to QAs. These individuals have been appointed by the Special Education Director or Superintendent to be the primary point of contact for EED's Alternate Assessment Program Manager.

Mentor Responsibilities

A district appoints a person to become a Qualified Mentor-Trainer (QT). A Mentor-in-training first must meet all of the training requirements to become certified as a QA.

A mentor-in-training attends new mentor training as well as the annual mentor training. Both trainings are provided by EED and include:

- Complete all required training
- Receive materials to support training (PPT, handouts, examples of scoring protocols)
- Train a protégé to become a QA by:
  - Providing orientation to assessments and online training program and ongoing support
  - Reviewing and providing feedback to protégé on practice tests after they achieve proficiency on the online training
  - Upgrading protégé status from AIT to QA, after protégé have produced corrected scoring protocols to the qualifying level

After meeting qualifications, QTs become certified and have their status upgraded by EED or DRA.

Ongoing requirements to continue as a QT:

- Hold a QT Certificate, or attend new QT training
- Attend any required refresher trainings
- Refresh proficiency annually to maintain access to online system

- Sign Test Security Agreements annually and give to EED with a copy on file with the District Test Coordinators (DTCs)

Mentors have access to online reports to track their protégés' progress through training, update their status to QA when appropriate, track progress toward entering student demographic information, progress toward completion of assessment administrations, and to track any Assessors who have not completed student assessments during the last week(s) of the testing window.

Materials

All materials used in training are available to QTs for use in their respective districts to train and certify their new QAs. Materials are organized into sections on the ak.k12test.com website. Some material is restricted to personnel with QT status and higher, secure test documents are restricted to personnel with QA status or higher. The training pages and support materials for training are available to all registered users.

Test Administrator Training

Special education teachers who were selected by their districts to serve as QTs for the AKAA attended a two-day, New Mentor training in Juneau on September 27 and 28, 2012. After these Assessors-In-Training (AITs) completed all training and proficiency tests successfully, they administered a practice test, which was reviewed by DRA. Once the AIT completed these tasks, his or her account was updated to the status of QA. During training, these participants also scored a protégé's assessment protocols. After passing all these tasks, participants were upgraded to QT status, and were invited to attend the All Mentor Training in October 2012.

The additional responsibilities of a QT necessitate additional training, which was held October 25-26, 2012 in Anchorage. This training provided more in-depth information on the creation of and changes to the 2010-2012 AKAAs and Secure website, including training tips to the QTs.

New Mentor Training

The purpose of the AKAA Mentor Program is to prepare district level trainers who train district personnel in correct test administration procedures for the AKAA. Mentors are available throughout the year to answer questions and assist district personnel. They are the first point of contact in the district for EED's Alternate Assessment Program Manager. Additionally, Mentors act as an advisory group for the AKAA. Mentors should be certified teachers in the State of Alaska with a special education endorsement and have experience with low-incidence disabilities. The state encourages every district to have at least one QT and one QA.

The bulk of training occurs on the website http://ak.k12test.com. AITs participate in a series of video vignettes designed to familiarize them with both appropriate testing and scoring techniques. These training vignettes familiarize AITs with the wide variety of tasks they will encounter on the Alaska Alternate Assessment, and demonstrate all the nuances needed in a proper administration. Following the training exercises, AITs must pass a series of brief proficiency tests related to the different tasks in each content area, as well as tests on general administration.

Summary of Dates and Participants

The New Mentor training was conducted in Juneau, AK on October 15-17, 2012. After a brief introduction, instruction was given in obtaining passwords and login identities, and navigating through the AKAA training and score entry website. Participants then completed online training and proficiency tests for each of five content areas: test administration, reading, writing, mathematics, and science.

Appendix 3.1a New Mentor Training Attendees

Appendix 3.1b New Mentor Training Agenda

Appendix 3.1c New Mentor Training Handouts

New Mentor Scoring Accuracy Analysis

Portions of each of the training days were dedicated to gaining proficiency in administering the test to a "protégé." Participants administered and scored practice tests to each other. Participants also rated a protégé's assessment in reading, writing, mathematics, science, and ELOS. The protégé assessment that was scored was a fabricated set of assessments; all AITs received the same set of scored assessments. This allows for consistent scoring across Assessors, as well as tracking scoring issues across training years.

Annual Mentor Training

Annual Mentor training was held November 7 and 8, 2012 in Anchorage, AK. Participants from the New Mentor Training in September attended as well as veteran QTs.

Appendix 3.2a Annual Mentor Training Attendees

Appendix 3.2b Annual Mentor Training Agenda

Appendix 3.2c Annual Mentor Training Handouts

Webinars

An Annual Mentor Training Webinar was held on November 6, 2012. This webinar highlighted the key points of the Annual Mentor Training, including changes to the training website, additional training materials (especially in writing scoring), and key dates and events scheduled for the current testing year.

Appendix 3.3 Annual Mentor Training Webinar

On January 23, 2013, DRA and EED hosted a web-based seminar (webinar) for QTs of the updates to the AKAA website. The webinar served to update QTs to improvements to the AKAA website (led by DRA) and to update them on procedural information related to the AKAA system and procedures (led by EED).

Appendix 3.4 Pre-Test Webinar

Online Training

All Assessors must complete the online training through the ak.k12test.com site. After completing training, Assessors complete proficiency testing. After participating in training through the ak.k12test site on all aspects of administering, scoring, and data entry for the AKAA, Assessors-in-Training (AITs) participate in proficiency testing. Each of five training areas are tested with a 20-question multiple-choice test (Administration, Reading, Writing, Mathematics, and Science). AITs are given two opportunities to earn a passing score of 80% or greater. If the AIT is unsuccessful in two attempts, the AIT must contact his or her Qualified Mentor to reset the proficiency tests. The AIT then has another two opportunities to pass the test in that specific domain.

Appendix 3.5 AKAA 2013 Training Site Table of Contents

Qualified Mentors are encouraged to analyze the AIT's performance on the proficiency assessment and compare that to other data available through the ak.k12test.com Web report function.

Appendix 3.6 Website Report Specifications

Refresher Training and Testing

Returning QAs and returning QTs who completed training in 2009-2010 were eligible to participate in a more efficient training and a refresher-proficiency test. After completing the reduced training sections, returning Qualified Assessors and Qualified Mentor-Trainers completed a 25-question multiple-choice Refresher Proficiency Test. All five areas of training (Administration, Reading, Writing, Mathematics and Science) are assessed, and a score of 80% is required for passing.

After two failed attempts at passing the Refresher Proficiency Test, a returning Qualified Assessor's or Qualified Mentor-Trainer's test sessions are reset to the full set of five proficiency tests.

- Returning Qualified Assessors were instructed to contact their Mentor to reset the refresher tests.
- Returning Qualified Mentor-Trainers were instructed to contact EED to reset the refresher tests.

Appendix 3.7 Refresher Training Tasks

Security

Items and test documents are maintained in a secure fashion. Transfer of items or documents containing secure test items or documents containing FERPA-protected student information are made via a secure file transfer site.

During annual training, all participants are required to sign and return a test security agreement. This document reiterates the message from training: test security is of the utmost importance in obtaining valid and reliable scores. As such, QAs must keep all materials in a confidential location, and refrain from discussing specifics of the test with others. Following the close of the test administration window, all testing materials should be shredded (with the possible exception of test documents that are used by EED for relevant studies). Teachers cannot access the secure test documents until they have passed the training requirements (passing all proficiency tests and, for Assessors-In-Training, administration and submission of a practice test). After completion of all requirements, they are granted access to the secure test materials.

The Test Security Agreement is available in the appendix.

Appendix 3.8 Test Security Agreement

The ak.k12test.com and akreports.k12test.com websites are maintained in a secure and protected system, detailed in the appendix.

Appendix 3.9 Test Site Security

CHAPTER 4: SCORING

Overview

All Qualified Assessors complete the entire online training and proficiency testing. To become a QT, QAs participate in additional training, including administering and scoring a practice test, and reviewing an assessment and scoring procedures of a protégé. These tools were analyzed to determine efficacy of training around scoring. The protégé tool is not included in the appendices, as this tool is used each year.

Quality Control of Scoring

Procedures

Alaska educators who are new to administering the Alternate Assessment and Qualified Assessors who desire to become Qualified Mentor-Trainers (new mentors), are trained at the New Mentor Training. They complete a rigorous online training protocol (described in the previous section). At the conclusion of online training, new Assessors and new Mentors complete an online proficiency test. Participants must earn 80% or higher in each subject area (administration, Reading, Writing, Math and Science) and have two opportunities to do so. If the Assessor does not earn the required proficiency within two trials, he or she must contact a Mentor to have the trials reset for additional attempts.

DRA completes an analysis each year on the number of trials required to reach proficiency in the online proficiency tests. The ak.k12test.com site collects data as users access every tool available. A review of the number of Assessors who passed a given subject area's proficiency test (with the total number of Assessors who attempted the test) is shown below. Raw Assessor proficiency data has been shared with EED, but is not reported here due to teacher confidentiality.

Assessment	1st attempt	2nd attempt	3rd attempts	4th attempt	5 or more attempts
Administration	203	9	1	NA	NA
Reading	204	58	6	2	1*
Writing	198	70	43	13	8*
Math	201	34	13	6	4*
Science	199	4	2	NA	NA
Refresher	107	5	NA	NA	NA

* Several Assessors in training required more than five attempts to pass one or more proficiency tests. The Assessor who required a 5th attempt to pass the Reading proficiency test passed the test on that trial. Six of the eight Assessors who attempted the Writing proficiency test for a 5th time passed. The remaining two Assessors passed on their 6th attempt. All four Assessors who required a 5th attempt to pass the Mathematics proficiency test passed on that attempt,

One hundred twelve Assessors who were eligible to participate in the reduced Refresher training and Refresher proficiency tests passed within the first two trials.

Scoring Practice tests: Portions of the New Mentor training were devoted to gaining proficiency in administering the test to a "protégé," as described in the previous section. Participants demonstrated scoring accuracy ranging from 80% accurate in mathematics to 73% accurate in writing and science, with an overall accuracy of 71% across all four content areas and ELOS items.

Scoring Protégé Reviews: In terms of reviewing protégés, participants demonstrated scoring accuracy ranging from 96% in writing to 70% in science, with an overall accuracy rating of 84% in administration and scoring of protégés.

Qualified Mentors are responsible for training new Assessors within their districts, using the online training, proficiency testing, and practice test administration protocols established at New Mentor Training.

Appendix 4.1 New Mentor Scoring Accuracy Report

Appendix 4.2a-4.2m Practice Tests

Inter-rater Agreement

Reliability in scoring is obtained through required intensive training online, and in administering practice tests that are reviewed by a Qualified Mentor. These steps are detailed in Chapter 3.

Handling of Exceptional Cases

Seven participants in New Mentor Training required additional coaching to pass the task of assessing a protégé's test administration. All of these participants eventually met required expectations and completed their training successfully. Two original participants did not complete the training due to local contexts.

Reading Score-behind Observations

Phase 4 of the three-year *Writer Rating Study Final Plan*, the final portion of the plan, was adapted to include live reading score-behind accuracy observations from March 25-29, 2013. The project was a collaborative effort between EED, DRA, and a district's Qualified Trainer (QT). The purpose of the observations was to determine what adaptations to reading administration training might be needed for ongoing improvement of the Qualified Assessor (QA) training system. The observations were conducted for a sample of reading assessment administrations for the AKAA. Both quantitative and qualitative data were collected with data analysis including both descriptive statistics and correlations between district QAs and EED/DRA experts. Tester protocols were analyzed for quantitative data and qualitative information was gathered through observations and personal interviews. The districts, schools, and QAs who participated in the process are not reported, as all participants were assured of confidentiality.

Appendix 4.3 Reading Score-behind Report

Writing Scoring Accuracy Project

Student materials and scoring protocols for students in grade 5 were collected from District Test Coordinators statewide from April 13-20, 2013. These materials were analyzed based upon Correct Word Sequences scoring, Correct Letter Sequences scoring, and Ideas and Organization scoring. An expert rater reviewed all materials and provided scores for these measures for all students with viable records. These ratings were then compared to the Assessor's ratings to determine the level of agreement.

The results from this year's writing scoring accuracy project demonstrate high levels of rater accuracy for Alaska Qualified Assessors.

Descriptive statistics reveal large variations among the student population, with standard deviations approaching or exceeding mean scores in many cases. The descriptive statistics also demonstrate consistent ratings between the two raters (R1 = Alaska Assessor/ R2 = Expert Rater). The ratings are close together, with means and standard deviations reflecting largely consistent results.

The Kappa statistics for Grade 5 range from .857 on CWS1.56D2num to .981 on CLS1.56C1r and CLS1.56C2r. These results reflect almost perfect agreement across all ratings in Grade 5 with higher levels of agreement compared to last year's Grade 8 and 10 analyses; this finding suggests either that Grade 5 responses are very easy to score, or that the resources that EED and DRA have dedicated to improving the writing scoring process appear to have been impactful. Raters appear to have good command of scoring CLS, which was the primary focus of this year's analyses. Refresher training on scoring CWS does not appear to be required. While CWS rater agreement remained lower than other areas, the results of the analyses presented here are very positive and suggest quite strong agreement.

Cross-tabulation tables demonstrate a high degree of scoring accuracy, with most discrepancies limited to one unit above or below consensus ratings.

Appendix 4.4 Writing Scoring Accuracy Report

Data Entry

After entering each student eligible for an Alaska Alternate Assessment on their caseload to the online system, assessors enter student scores into the ak.k12test.com site, on the Data Entry page.

The student's grade of enrollment preloads the possible assessments available for that student. Assessors enter the scores for each item in each eligible assessment, or indicate a reason not tested.

After entering scores in all available subject areas, Assessors are prompted to submit the scores to EED. There are two ways to submit scores to EED.

1. After all scores for all required assessments have been entered, the system prompts the QA to submit the data to EED. QAs may select this option to "Submit" the data at this point; or,

2. Alternately, a QA may return to the Data Entry page and mark the record as complete by choosing the appropriate status in the Status of Data Entry drop-down box in the left-hand column.

To mark the record complete, the Assessor must have entered data for each subject or given a reason why the test wasn't administered. If a subject area assessment is not administered for a student, the Assessor must choose a "Reason Not Tested" for that assessment. Scores not submitted by the close of the testing window are invalidated.

Following are the "reasons not tested" that a QA or DTC would choose to alert DRA and EED about why they are not testing a student. This information is located in the Data Entry section of the online assessment system. Students may participate in one or more Alaska Alternate Assessment content areas, and may not be eligible to participate in the AA-AAs in the other content areas tested.

1. IEP Change This code is selected for students who have an IEP change indicating they are no longer eligible to take the Alaska Alternate Assessment in one or more content areas, and will be taking the Standards Based Assessment (SBA) instead. This code should only be selected for the content areas in which the student is not taking the Alaska Alternate Assessment.

2. Late Entry This code is entered for students who enter the district from out of state or from a private school after the Alaska Alternate Assessment test window opens. In order to count for the district's participation rate, the district must administer a minimum of one assessment in reading, writing, or mathematics. This code should only be selected for the content areas in which the student is not being assessed.

3. Suspension The student is suspended or expelled for the entire test window. If this code is selected, it automatically applies to all content areas.

4. Other Any other reason must be documented in a text box that will appear when the "Other" code is selected. This code should only be selected for the content areas in which the student is not assessed. Text is limited to 50 characters, including spaces.

Beginning with the 2010-2012 testing window, EED lengthened the testing window to 10 weeks. "Long Term Absence" is no longer an approved reason for not testing a student in the Alaska Alternate Assessment.

For the 2012-2013 assessment, as in 2011-2012, Assessors were asked to define the scheduling of test administration during the data entry process. Assessors chose one of four options:

Timing/Scheduling Accommodations:
A. This subject administered with breaks/multiple sessions
B. This subject administered with NO breaks/one session
C. Multiple-subject administration with breaks/multiple sessions
D. Multiple-subject administration with NO breaks/one session

Choose all tests administered in one session: [checkboxes, allow one or all to be chosen]
0 Reading 0 Writing 0 Math 0 Science

"Breaks" means that the student was provided frequent breaks during testing.
"Multiple sessions" means that the test was administered over several days.

Assessors employed timing and scheduling accommodations in the following amounts:

Choice	Reading	Writing	Math	Science
A	241	232	246	81
B	334	334	324	117
C	91	99	93	33
D	34	35	37	13

In addition, teachers of students eligible for the Alaska Alternate Assessment are encouraged to use the Alaska Alternate Assessment practice tests throughout the school year with their students. The practice tests allow the teacher/test administrator to become more comfortable manipulating the testing materials, allow the teacher to test the efficacy of accommodations with students in testing situations, and allow the teacher to develop an understanding of student stamina and tolerance for performance testing tasks. In addition, the teacher may help the student develop test-taking strategies and become comfortable with the Alaska Alternate Assessment testing format prior to administration of the official Alaska Alternate Assessment.

There is a certain amount of flexibility for the test administrator with regard to how to present student materials. In addition to altering the materials for an allowable

accommodation (e.g., increasing the text size of student materials), real-life objects may be substituted for those represented in the materials. For example, an actual glass of water may be used in lieu of the drawing of a glass of water provided in the materials, if this makes the test item more accessible to the particular student. Large Print and Braille tests are also available.

The QA may position himself in any location that is most helpful for managing the assessment materials, the student's behaviors and access to the assessment materials, and the scoring protocols. This may be side by side with the student, across the table from the student, or any position that works for the assessor and the student.

Additional resources on accommodations are available:

EED Accommodations
website: http://www.eed.state.ak.us/tls/assessment/accommodations.html

National Center on Educational Outcomes accommodations
website: http://www.cehd.umn.edu/NCEO/TopicAreas/Accommodations/Accomtopic.htm

Analysis of Accommodations Used

DRA collected data from Assessor input regarding the accommodations used in the 2012-2013 assessments. For each subject area, the total number of accommodations made is reported, as well as the total number of students receiving one or more accommodations to the Alaska Alternate Assessment.

- In Reading, there were 27 types of accommodations made to the test administration with 97 types of accommodations made for student responses and 2 types of accommodations made to the test materials. A total of 148 students utilized one or more type of accommodation in Reading.
- In Writing, there were 22 types of accommodations made to the test administration with 8 types of accommodations made for student responses 3 types of accommodations made to the test materials. A total of 138 students utilized one or more type of accommodation in Writing.
- In Mathematics, there were 27 types of accommodations made to the test administration with 13 types of accommodations made for student responses and 5 types of accommodations made to the test materials. A total of 169 students utilized one or more type of accommodation in Mathematics.
- In Science, there were 23 types of accommodations made to the test administration with 2 types of accommodations made for student responses and 4 types of accommodations made to the test materials. A total of 46 students utilized one or more type of accommodation in Science.

Accommodations that are possible modifications are marked with an asterisk (*) in Appendix 4.5. For the 2012-2013 testing year, the number of different types of

accommodations that might be modifications were reduced. “Hand over hand assistance” is a type of accommodation that appeared frequently, across all subject areas (3 times in Reading, 5 in Writing; 4 in Math and 2 times in Science). Each of these students receiving hand-over-hand assistance were also students taking part in the ELOS administration. Hand-over-hand assistance is a permitted level of support for students participating in the ELOS administration.

Accommodations which were marked with an asterisk in 2010-2012, but which had zero instances in 2012-2013 are left in the list to show improvement in this area. Raw accommodations data has been shared with EED, but is not reported here due to student confidentiality.

Appendix 4.5 Accommodations Used Summary

ELOS Scoring

ELOS tasks are scored one through four. Scores are defined in the Levels of Independence Scoring Rubric. The additional levels of support are designed to bring the student to success. The Assessor begins with the least amount of additional support (e.g., the Assessor asks the question and waits for the student to respond), and introduces successively greater amounts of support, as needed by the student. Drawing the student's attention to the page by pointing in general to the answer choices is not considered a gestural support. A gestural support in ELOS is when the Assessor points to the correct answer ("Which one is the math problem" -- "This one (pointing to the math problem) is the math problem. Can you point to the math problem?").

ELOS Scores

1- Full physical contact to elicit student response
2- Partial physical contact to elicit student response
3- Visual, Verbal, and/or Gestural Prompts to elicit student response
4- Independent: No contact and no prompting needed to elicit student response

CHAPTER 5: STANDARDS VALIDATION

The Alaska Alternate Assessment did not undergo a standards validation analysis this year.

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CHAPTER 6: REPORTING

Overview

A number of tables are presented in the appendix, displaying various statistics for use in interpreting the AKAA reports.

All tables and analyses are presented for subject area results in a standardized layout format: reading, writing, mathematics, and science.

Frequency counts are used to display the number and percentage of students at various grade bands. The number and percentage of students at each score value are also displayed in the appendix. An important statistic in every table is the valid N or the number of students represented in the statistic for any given measure. Means and standard deviations are used to describe the distributions at various grade bands. These two statistics should be interpreted relative to each other; ideally, the Standard Deviation (SD) is less than (even half) the amount mean, which can be interpreted as reflecting an appropriate amount of variation. When the SD is close to or greater than the mean, then the distribution is difficult to describe as there appears to be as much variation as there is centeredness. Minimums and maximums reflect the smallest and largest scores obtained on the test, respectively.

Many tables have a total that simply reflects the sum of any frequency count across all categories (e.g. grade level or score value). System missing refers to the number of students who are not in that statistical calculation (either frequency or mean).

When reliability coefficients are displayed, a value is presented that varies from a low moderate decimal (in the .30-.50 range), a moderate range (.51 to .79) or a relatively high value (in the .80 to .97 range). These values represent the degree to which two variables (e.g. forms of the test or items within the test) are related. Generally, higher is better, as the information from one measure (item or form) can be used to predict another item or form. In some cases, however, the values should not be too high (e.g., when reflecting the relations among different items in the test), because it would mean that, essentially, they are duplicating the information.

This statistic, however, is a function of the number of values (in the test) that are counted (as well as the number students behind any of these values). For example, at the total test level, many items are used to calculate the coefficient; at the strand level, sufficient items are present. However, at the task level, the number of items is so few that the values are likely to be low because there simply is not enough variation present to reflect a high coefficient.

Reporting Student Results

Two score reports are generated for each student: an Unofficial Score Report and an Official Score Report. The *Unofficial Score Report* is generated immediately on completion and submission of student scores for all eligible alternate assessments. This report is an exact accounting of the student's performance. *Official Student Reports* are released to the District Test Coordinator in mid-May, after the AYP calculations are completed. The Official Student Report reports a student's proficiency level relative to the Extended Grade Level Expectations (ExGLE).

Chapter nine fully describes the calculations, results, and reporting methodologies for AYP.

The differences between these two sets of scores are explained in a comparison chart, available in the appendix.

Appendix 6.1 Unofficial and Official Individual Student Report Matrix

The appendix also lists sample documents used in reporting student results, including an Unofficial Student Report, and Official Student Reports in Reading, Writing, Math, and Science, and Guides to educators and parents on reading and understanding student score reports.

Appendix 6.2a Educator Reading, Writing, Math and Science Guides

Appendix 6.2b Parent Reading, Writing, Math and Science Report Guides

DRA Secure Reporting Website

Official Individual Student Reports were made available to each district's District Test Coordinator on May 16, 2013. Beginning this year, Qualified Mentor-Trainers also received passwords to access the secure reporting site. Reports are downloaded from the secure Reporting Website at akreports.k12test.com. District Test Coordinators are given a secure user identification and password at an annual training, held in February.

Reports are bundled for each district by school and then by student last name.

Appendix 6.3 Reporting Website Manual

CHAPTER 7: TEST VALIDITY

Overview

The statistical data output for Chapter 7 and Chapter 9 are located in the appendix in the folder for Chapter 7. The data output for Chapter 8, strand, task, and item difficulty statistics, are included in the body of the technical report. The document for each subject area contains the output regarding AYP calculations, test strand descriptive statistics, task descriptive statistics, task item descriptive statists and reliability statistics.

Validity

As elaborated by Messick (1989)[1], the validity argument involves a claim with evidence evaluated to make a judgment. Three essential components of assessment systems are necessary: (a) constructs (what to measure), (b) the assessment instruments and processes (approaches to measurement), and (c) use of the test results (for specific populations). To put it simply, validation is a judgment call on the degree to which each of these components is clearly defined and adequately implemented.

Validity is a unitary concept with multifaceted processes of reasoning about a desired interpretation of test scores and subsequent uses of these test scores. In this process, we want answers for two important questions. Regardless of whether the students tested have disabilities, the questions are identical: (1) How valid is our interpretation of a student's test score? and, (2) How valid is it to use these scores in an accountability system? Validity evidence may be documented at both the item and total test levels. We use the *Standards*[2] (AERA et al., 1999) in documenting evidence on content coverage, response processes, internal structure, and relations to other variables. This document follows the essential data requirements of the federal government as needed in the peer review.[3] The critical elements highlighted in that document (with examples of acceptable evidence) include (a) academic content standards, (b) academic achievement standards, (c) a statewide assessment system, (d) validity, (e) reliability, and (f) other dimensions of technical quality.

This document addresses the latter four requirements (c-f noted above), with other documents providing essential information on the standards and statewide assessment system (see technical specifications and alignment documents for information on academic content standards and the standard setting document for information on the academic achievement standards). In addressing technical documentation, we first present content evidence, then reliability, and finally address the other three areas noted in the peer review guidance: response process, internal structures, and criterion relations.

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[1] Messick, S. (1989). Validity. In R. L. Linn (Ed.), *Educational measurement* (3rd ed., pp. 13-103). New York: American Council on Education.

[2] American Educational Research Association (AERA), American Psychological Association, & National Council on Measurement in Education (1999). *Standards for educational and psychological testing.* Washington, DC: AERA.

[3] U. S. Department of Education (2004). *Standards and Assessments Peer Review Guidance: Information and Examples for Meeting Requirements of the No Child Left Behind Act of 2001*

Content related evidence includes information on technical specifications and the quality of review used during the design and development of the alternate assessment. In particular, we emphasized 'universal design' in developing items and tasks that would be clear enough in their presentation and sufficiently flexible in their administration to allow ALL students access. This outcome was achieved through both the item writing and reviewing in which content experts and special educators provided feedback through the stages of test development. We also summarize outcome data as a reference for understanding subsequent validity evidence for content skills and knowledge.

Reliability

The data file was analyzed for reliability at several levels. First, at the total test level, which is the most important because Adequate Yearly Progress (AYP) is established on the basis of this score, reliability coefficients are reported for every grade band and subject area. Second, at the strand level, coefficients are reported for every grade band and subject area. The test was designed to reflect scores at this level to ensure adequate representation across the entire range of Extended Grade Level Expectations; in the official student reports, scores for every strand are reported so that parents and teachers can follow the performance and progress of students. Third, and perhaps least important, are the scores at the task level; though we report these coefficients, they are primarily directed toward the continuous improvement of the test as EED develops new field tests and integrates them into the operational test.

In the tables for total test and strands, the reliability coefficients are reported for both the entire population (ALL students) and the students who took the complete Standard administration with students who participated in the Expanded Levels of Support (ELOS) removed (with NO ELOS). This population includes students with extremely low levels of functioning with little to no interactivity or means of communication. The reason for removing this group was to investigate the influence of missing data and its potential to spuriously inflate reliability coefficients. The first step in removing this group was to integrate the ELOS data file with the standard administration file. The second step involved splitting the file on ELOS participation and removing them so that all reliability coefficients could be recomputed at each level (total test, strand, and task). This re-analysis was done for each subject area and at all grade bands.

In general, the findings indicate that the test is very reliable for decision-making (of AYP) at the total test level. Scores were quite reliable at the strand level (with only a few strands reflecting moderate coefficients, which was primarily a function of the few number of tasks involved). Finally, as expected, scores were moderately reliable at the task level, primarily because of the few items involved. Another general (and expected) finding is that the coefficients are somewhat lower when the ELOS students scores are removed from the standard administration file although the reduction is not large, as only 9-11% of the students were administered ELOS tasks/items (see the section "Item Performance: Task Difficulty [Standard Administration, No ELOS] for summary results).

Students who participate in ELOS administration are included in the participation rate reporting for AYP; however their scores are reported as Far Below Proficient for AYP performance reporting.

Total Test Reliabilities (All Students)

Reading: Grades 3-4 (.900 for 111 students taking 39 items), grades 5-6 (.946 for 124 students taking 35 items), grades 7-8 (.931 for 144 students taking 35 items), and grades 9-10 (.918 for 131 students taking 41 items.

Writing: Grades 3-4 (.836 for 133 students taking 21 items), grades 5-6 (.873 for 141 students taking 11 items), grades 7-8 (.927 for 162 students taking 16 items), and grades 9-10 (.810 for 149 students taking 17 items).

Mathematics: Grades 3-4 (.925 for 129 students taking 26 items), grades 5-6 (.950 for 122 students taking 51 items), grades 7-8 (.950 for 146 students taking 66 items), and grades 9-10 (.961 for 137 students taking 65 items).

Science: Grade 4 (.845 for 57 students taking 24 items), grade 8 (.890 for 72 students taking 24 items), and grade 10 (.809 for 74 students taking 24 items).

Appendices 7.1 – 7.4 Reading, Writing, Math, and Science Statistics

Test Task Reliabilities

Reading Reliability

Reading Grades 3 and 4

Task Name	Cronbach's Alpha
1.34A: Identify Signs and Symbols	.790
1.34B: Identify Letter Sounds	.908
1.34C: Blend Sounds	.956
2.34A: Read Passages: Story 1, Annie Goes to a Party	.451
2.34B: Read Passages: Story 2, Jimmy Rides the Bus	.797

Reading Grades 5 and 6

Task Name	Cronbach's Alpha
1.56A: Read Words	.924
1.56B: Read Sentences	.920
2.56A: Read Passages: Story 1, Jill and the Zoo	.850
2.56B: Read Passages: Story 2, Jimmy Rides the Bus	.815

Reading Grades 7 and 8

Task Name	Cronbach's Alpha
1.78A: Read Words of Increasing Complexity	.928
1.78B: Obtain Information	.760
1.78C: Read Sentences	.954
2.78A: Read Passages: Story1, Day at the Lake	.863
2.78B: Read Passages: Story 2, Going to the City	.805

Reading Grades 9 and 10

Task Name	Cronbach's Alpha
1.910A: Decode Words	.949
1.910B: Identify Root Words	.765
2.910A: Read Passages: Story 1, The Legend of Mount St. Helens	.747
2.910C: Read Passages: Story 2, Hannah's Homework	.806

Writing Reliability

Writing Grades 3 and 4

Task Name	Cronbach's Alpha
1.34A: Copy Letters	.949
1.34B: Copy Words	.950

Writing Grades 5 and 6

Task Name	Cronbach's Alpha
1.56C: Write Words from Dictation	.914
1.56D: Write a Sentence	.951

Writing Grades 7 and 8

Task Name	Cronbach's Alpha
1.78A: Write Sentences from Dictation	.956
1.78B:Conventions of Standard English	.860
1.78C: Communicate Ideas Using Words	.931
1.78E: Revise Sentences	.796

Writing Grades 9 and 10

Task Name	Cronbach's Alpha
1.910A: Revise Sentences	.913
1.910C: Revise Writing	.811

Math Reliability

Math Grades 3 and 4

Task Name	Cronbach's Alpha
1.34A: Copy Numbers	.945
1.34B: First and Last	.800
2.34: Same and Different	.843

Math Grades 5 and 6

Task Name	Cronbach's Alpha
1.56A: Read & Write Numbers	.823
2.56: Simple Addition	.950
3.56: Reproduce Simple Patterns	.860
4.56: Read Simple Graphs	.842
5.56B: Identify Money	.729
6.56A: Identify Shapes	.789

Math Grades 7 and 8

Task Name	Cronbach's Alpha
1.78A: Read & Write Numbers, ID Place Value	.714
1.78C: Number Line	.848
2.78: Double Digit Addition & Subtraction	.934
3.78B: Label a Set as None or Zero	.957
4.78: Read Simple Graphs	.798
5.78A: Identify Units of Measurement	.775
5.78C: Identify Money	.895
6.78A: Identify Shapes/Position	.885

Grades 9 and 10

Task Name	Cronbach's Alpha
1.910A: Identify Place Value	.917
1.910B: Identify Fractions	.758
2.910B: Double-Digit Addition/Subtraction & Single-Digit Multiplication	.904
3.910A: Extend a Pattern/Supply Missing Element	.756
3.910B: Understand Symbols	.702
4.910: Read Simple Graphs	.874
5.910A: Identify Units of Measurement	.851
6.910A: Describe & Compare Shapes	.758

Science Reliability

Science Grade 4

Task	Cronbach's Alpha
1.4: Concepts of Physical Science	.607
2.4: Concepts of Life Science	.655
3.4: Concepts of Earth Science	.558
4.4: History and Nature of Science, Science and Technology	.583

Science Grade 8

Task	Cronbach's Alpha
1.8: Concepts of Physical Science	.688
2.8: Concepts of Life Science	.730
3.8: Concepts of Earth Science	.728
4.8: Science and Technology	.716

Science Grade 10

Task	Cronbach's Alpha
1.10: Concepts of Physical Science	.605
2.10: Concepts of Life Science	.554
3.10: Concepts of Earth Science	.519
4.10: Science and Technology	.607

Item Analysis of ELOS Administration

The ELOS RWMS were reviewed to ensure that the assessments continued to function as intended. The items were designed such that within each of three tasks per grade band, per content area, item 1 should be less difficult than item 2, item 2 less difficult than item 3, and so forth. Item 1 was written as an attention item, item 2 as an interaction item, item 3 as an easy item, item 4 as a medium item, and item 5 as a difficult item.

Item difficulties were calculated using the average scores for all students on each item. A review of average item difficulties demonstrated that the test design worked remarkably well. Out of a total of 180 possible item sequences on all assessments, only 15 were out of order in the domain of item difficulty, meaning that the item difficulties for subsequent items were higher. In total, 92% of the item sequences in this year's operational test were in the appropriate sequence. This demonstrates an improvement compared to last year's administration (87%). It is recommended that no item shifts be effected this year, however, as differences this small might be attributed to populations and not to the test design.

The ELOS assessments reflect an appropriate range of item difficulties, with average item difficulties ranging from 1.52 to 3.64 in Reading, from 1.33 to 3.70 in Writing, from 1.35 to 3.71 in Math, and from 1.20 to 3.82 in Science. All item difficulties are reported below. Average item difficulties in each content area across all grade bands were 2.55 in Reading, 2.46 in Writing, 2.43 in mathematics, and 2.36 in science.

ELOS Reading Grades 3-4

Task Number	Item Number	Average Score (1-4)
Task 1	1	3.26
Task 1	2	2.58
Task 1	3	2.34
Task 1	4	2.11
Task 1	5	1.62
Task 2	1	2.92
Task 2	2	2.75
Task 2	3	2.25
Task 2	4	1.81
Task 2	5	1.83
Task 3	1	3.22
Task 3	2	2.92
Task 3	3	2.92
Task 3	4	2.36
Task 3	5	1.62
TOTAL		**2.43**

ELOS Reading Grades 5-6

Task Number	Item Number	Average Score (1-4)
Task 1	1	3.64
Task 1	2	3.24
Task 1	3	2.88
Task 1	4	2.24
Task 1	5	1.52
Task 2	1	3.32
Task 2	2	2.24
Task 2	3	1.96
Task 2	4	1.88
Task 2	5	1.60
Task 3	1	3.32
Task 3	2	2.71
Task 3	3	2.32
Task 3	4	2.24
Task 3	5	1.88
TOTAL		**2.47**

ELOS Reading Grades 7-8

Task Number	Item Number	Average Score (1-4)
Task 1	1	3.55
Task 1	2	3.43
Task 1	3	3.00
Task 1	4	2.18
Task 1	5	1.86
Task 2	1	3.18
Task 2	2	2.82
Task 2	3	2.18
Task 2	4	2.02
Task 2	5	1.90
Task 3	1	3.14
Task 3	2	2.80
Task 3	3	2.10
Task 3	4	1.88
Task 3	5	2.04
TOTAL		**2.54**

ELOS Reading Grades 9-10

Task Number	Item Number	Average Score (1-4)
Task 1	1	3.58
Task 1	2	3.36
Task 1	3	3.06
Task 1	4	2.19
Task 1	5	2.06
Task 2	1	3.52
Task 2	2	3.21
Task 2	3	2.61
Task 2	4	2.78
Task 2	5	2.41
Task 3	1	3.30
Task 3	2	3.15
Task 3	3	2.06
Task 3	4	2.19
Task 3	5	2.03
TOTAL		**2.77**

ELOS Writing Grades 3-4

Task Number	Item Number	Average Score (1-4)
Task 1	1	3.43
Task 1	2	3.05
Task 1	3	1.73
Task 1	4	1.63
Task 1	5	1.63
Task 2	1	3.35
Task 2	2	3.25
Task 2	3	1.65
Task 2	4	1.62
Task 2	5	1.50
Task 3	1	3.18
Task 3	2	2.68
Task 3	3	2.08
Task 3	4	1.88
Task 3	5	1.98
TOTAL		**2.31**

ELOS Writing Grades 5-6

Task Number	Item Number	Average Score (1-4)
Task 1	1	3.55
Task 1	2	3.23
Task 1	3	2.58
Task 1	4	2.25
Task 1	5	1.90
Task 2	1	3.58
Task 2	2	3.33
Task 2	3	2.43
Task 2	4	1.98
Task 2	5	1.78
Task 3	1	3.70
Task 3	2	3.08
Task 3	3	2.53
Task 3	4	2.30
Task 3	5	1.33
TOTAL		**2.64**

ELOS Writing Grades 7-8

Task Number	Item Number	Average Score (1-4)
Task 1	1	3.40
Task 1	2	3.04
Task 1	3	2.23
Task 1	4	2.30
Task 1	5	2.04
Task 2	1	3.36
Task 2	2	2.85
Task 2	3	1.79
Task 2	4	1.60
Task 2	5	1.60
Task 3	1	3.09
Task 3	2	2.66
Task 3	3	1.72
Task 3	4	1.62
Task 3	5	1.53
TOTAL		**2.32**

ELOS Writing Grades 9-10

Task Number	Item Number	Average Score (1-4)
Task 1	1	3.51
Task 1	2	3.31
Task 1	3	2.69
Task 1	4	2.44
Task 1	5	2.12
Task 2	1	3.34
Task 2	2	2.74
Task 2	3	2.20
Task 2	4	1.63
Task 2	5	1.69
Task 3	1	3.23
Task 3	2	2.71
Task 3	3	2.23
Task 3	4	2.14
Task 3	5	2.33
TOTAL		**2.55**

ELOS Mathematics Grades 3-4

Task Number	Item Number	Average Score (1-4)
Task 1	1	3.30
Task 1	2	2.93
Task 1	3	1.73
Task 1	4	1.43
Task 1	5	1.43
Task 2	1	3.03
Task 2	2	1.97
Task 2	3	1.84
Task 2	4	1.45
Task 2	5	1.35
Task 3	1	3.07
Task 3	2	2.53
Task 3	3	1.80
Task 3	4	1.60
Task 3	5	1.40
TOTAL		**2.06**

ELOS Mathematics Grades 5-6

Task Number	Item Number	Average Score (1-4)
Task 1	1	3.71
Task 1	2	3.57
Task 1	3	2.25
Task 1	4	1.89
Task 1	5	2.00
Task 2	1	3.64
Task 2	2	3.46
Task 2	3	2.36
Task 2	4	2.07
Task 2	5	2.00
Task 3	1	3.71
Task 3	2	2.82
Task 3	3	2.29
Task 3	4	2.43
Task 3	5	2.07
TOTAL		**2.68**

ELOS Mathematics Grades 7-8

Task Number	Item Number	Average Score (1-4)
Task 1	1	3.31
Task 1	2	3.13
Task 1	3	2.47
Task 1	4	1.91
Task 1	5	1.84
Task 2	1	3.20
Task 2	2	2.51
Task 2	3	2.27
Task 2	4	2.04
Task 2	5	2.16
Task 3	1	3.11
Task 3	2	2.87
Task 3	3	1.82
Task 3	4	1.89
Task 3	5	1.89
TOTAL		**2.43**

ELOS Mathematics Grades 9-10

Task Number	Item Number	Average Score (1-4)
Task 1	1	3.42
Task 1	2	3.14
Task 1	3	2.06
Task 1	4	2.00
Task 1	5	2.14
Task 2	1	3.39
Task 2	2	2.97
Task 2	3	2.06
Task 2	4	1.76
Task 2	5	1.77
Task 3	1	3.50
Task 3	2	2.92
Task 3	3	2.97
Task 3	4	2.09
Task 3	5	1.71
TOTAL		**2.53**

ELOS Science Grade 4

Task Number	Item Number	Average Score (1-4)
Task 1	1	3.70
Task 1	2	3.20
Task 1	3	1.80
Task 1	4	1.30
Task 1	5	1.20
Task 2	1	3.36
Task 2	2	3.00
Task 2	3	1.55
Task 2	4	1.82
Task 2	5	1.36
Task 3	1	3.82
Task 3	2	3.36
Task 3	3	1.73
Task 3	4	1.55
Task 3	5	1.45
TOTAL		**2.28**

ELOS Science Grade 8

Task Number	Item Number	Average Score (1-4)
Task 1	1	3.38
Task 1	2	3.31
Task 1	3	2.31
Task 1	4	2.06
Task 1	5	1.88
Task 2	1	3.38
Task 2	2	2.88
Task 2	3	1.94
Task 2	4	1.88
Task 2	5	1.75
Task 3	1	3.50
Task 3	2	2.94
Task 3	3	2.19
Task 3	4	2.06
Task 3	5	1.56
TOTAL		**2.47**

ELOS Science Grade 10

Task Number	Item Number	Average Score (1-4)
Task 1	1	3.45
Task 1	2	3.18
Task 1	3	1.73
Task 1	4	1.45
Task 1	5	1.36
Task 2	1	3.36
Task 2	2	2.82
Task 2	3	2.36
Task 2	4	1.64
Task 2	5	1.55
Task 3	1	3.55
Task 3	2	3.18
Task 3	3	1.64
Task 3	4	2.00
Task 3	5	1.73
TOTAL		**2.33**

CHAPTER 8: DESCRIPTIVE STATISTICS

Descriptive statistics were calculated for each task, in every subject area, and in both grade bands and grade levels. The upper right header of each page refers the reader to the type of descriptive statistics displayed. For instance, "Grade Band Total Test Descriptive Statistics" refers to the descriptive statistics at the total test level for each subject, while "Writing Task Descriptive Statistics (Grade Band 3/4)" refers to the descriptive statistics for writing at the task level, in grade band 3/4. The following statistics are reported in the tables in Appendix 7 (leftmost column to rightmost column).

Strand, Task, and Item Difficulties

Strand Difficulties in Reading, Writing, Math, and Science (Standard, No ELOS)

The tables provided below elaborate the strand difficulties for reading, writing, mathematics in grade bands 3/4, 5/6, 7/8, and 9/10. Science strand difficulties are presented in grades 5, 8, and 11. Strand names are provided, as are *p*-values. The *p*-value represents the proportion of the students responding in the keyed direction (e.g., students who received partial or full credit, with students receiving full credit contributing more significantly to the rating). Low values are difficult and high values are easy.

Reading Strand Difficulties

The AKAA Reading Assessment was grouped into four grade bands: Grades 3/4, Grades 5/ 6, Grades 7/ 8, and Grades 9/10. Within these grade band assessments, items directly correlated to the Alaska Extended Grade Level Expectations (ExGLEs), and were organized at the strand level. The most difficult strand is Form a General Understanding in Grade Band 9/10, with a 45% success rate. The easiest strand is Analyze Content and Structure in Grade Band 5/6, with a 70% success rate. The variable '*p*' is an index of strand difficulty, with lower numbers indicating lower rates of success.

Strand Name	*p*
Word Identification 3/4	.48
Form a General Understanding 3/4	.58
Word Identification 5/6	.54
Form a General Understanding 5/6	.54
Analyze Content and Structure 5/6	.70
Word Identification 7/8	.54
Form a General Understanding 7/8	.67
Analyze Content and Structure 7/8	.63
Word Identification 9/10	.57
Form a General Understanding 9/10	.45
Analyze Content and Structure 9/10	.62

Writing Strand Difficulties

The AKAA Writing Assessment was grouped into four grade bands: Grades 3/4, Grades 5/ 6, Grades 7/ 8, and Grades 9/10. Within these grade band assessments, items directly correlated to the Alaska Extended Grade Level Expectations (ExGLEs), and were organized at the strand level. The most difficult strand is Write Using a Variety of Forms in Grade Band 9/10, with a 36% success rate. The easiest strand was Revise in Grade Band 9/10, with a 66% success rate.

Strand Name	*p*
Write Using a Variety of Forms 3/4	.60
Write Using a Variety of Forms 5/6	.43
Structures and Conventions 5/6	.43
Write Using a Variety of Forms 7/8	.38
Structures and Conventions 7/8	.61
Revise 7/8	.57
Write Using a Variety of Forms 9/10	.36
Structures and Conventions 9/10	.63
Revise 9/10	.66

Mathematics Strand Difficulties

The Alaska Alternate Mathematics Assessment was grouped into four grade bands: Grades 3/4, Grades 5/ 6, Grades 7/ 8, and Grades 9/10. Within these grade band assessments, items directly correlated to the Alaska Extended Grade Level Expectations (ExGLEs), and were organized at the strand level. The most difficult strand is Estimation and Computation in Grand Band 9/10, with a 50% success rate. The easiest strand is Geometry in Grand Band 3/4 , with a 73% success rate.

Strand Name	*p*
Numeration 3/4	.62
Functions and Relations 3/4	.57
Geometry 3/4	.73
Numeration 5/6	.71
Estimation and Computation 5/6	.54
Statistics and Probability 5/6	.61
Measurement 5/6	.68
Functions and Relations 5/6	.68
Geometry 5/6	.64

Strand Name	*p*
Numeration 7/8	.57
Estimation and Computation 7/8	.53
Functions and Relations 7/8	.67
Statistics and Probability 7/8	.59
Measurement 7/8	.61
Geometry 7/8	.67
Numeration 9/10	.61
Estimation and Computation 9/10	.50
Functions and Relations 9/10	.69
Statistics and Probability 9/10	.67
Measurement 9/10	.62
Geometry 9/10	.60

Science Strand Difficulties

The AKAA Science Assessment was grouped into three grade level assessments: Grade 4, Grades 8, and Grade 10. Within these grade band assessments, items directly correlated to the Alaska Extended Grade Level Expectations (ExGLEs), and were organized at the strand level. The most difficult strands are Concepts of Physical Science in Grade 4 and Concepts of Physical Science in Grade 8, both with a 55% success rate. The easiest strand is Science and Technology in Grade 8, with a 76% success rate.

Strand Name	*p*
Concepts of Physical Science 4	.55
Concepts of Life Science 4	.57
Concepts of Earth Science 4	.61
Science and Technology 4	.57
Concepts of Physical Science 8	.55
Concepts of Life Science 8	.61
Concepts of Earth Science 8	.64
Science and Technology 8	.76
Concepts of Physical Science 10	.62
Concepts of Life Science 10	.60
Concepts of Earth Science 10	.63
Science and Technology 10	.69

Task Difficulty (Standard, No ELOS)

All task difficulty statistics for reading, writing, mathematics, and science are presented in the tables below. Task descriptions are provided, as are *p*-values. The *p*-value represents the proportion of the students responding in the keyed direction (e.g., students who received partial or full credit, with students receiving full credit contributing more significantly to the rating). The variable '*p*' is an index of task difficulty, with lower numbers indicating lower rates of success.

Reading Task Difficulties

The following tables summarize task difficulties for each grade band in reading. Reading task difficulties range from .32 to .85.

Reading Tasks Grade Band 3/4

The most difficult task in the 3/4 Grand Band is Identify Signs and Symbols, with a success rate of approximately 41%. The easiest task in the 3/4 Grade Band is Identify Own Name, with a success rate of approximately 85%.

Task Name	*p*
Identify Signs and Symbols	.41
Identify Letter Sounds	.55
Blend Sounds	.55
Identify Own Name	.85
Annie Goes to a Party	.55
Jimmy Rides the Bus	.60

Reading Tasks Grade Band 5/6

The most difficult task in the 5/6 Grand Band is Fact/Opinion: Story 2, Jimmy Rides the Bus, with a success rate of approximately 44%. The easiest task in the 5/6 Grade Band is Read Passages: Story 2, Jimmy Rides the Bus, with a success rate of approximately 73%.

Task Name	*p*
Read Words	.54
Read Sentences	.54
Jill and the Zoo	.55
Jimmy Rides the Bus: Part 1	.73
Jimmy Rides the Bus: Part 2	.44

Reading Tasks Grade Band 7/8

The most difficult task in the 7/8 Grade Band is Obtain Information, with a success rate of approximately 32%. The easiest task in the 7/8 Grade band is Read Passages: Story 1, A Day at the Lake, with a success rate of approximately 69%.

Task Name	*p*
Read Words of Increasing Complexity	.60
Obtain Information	.32
Read Sentences	.61
Day At The Lake	.69
Going to the City	.61

Reading Tasks Grade Band 9/10

The most difficult task in the 9/10 Grade Band is Identify Root Words, with a success rate of approximately 55%. The easiest task in the 9/10 Grade Band is Decode Words, with a success rate of approximately 59%.

Task Name	*p*
Decode Words	.59
Identify Root Words	.55
Follow Multi-Step Directions	.57
The Legend of Mount St. Helens: Part 1	.56
The Legend of Mount St. Helens: Part 2	.56
Hannah's Homework	.56

Writing Task Difficulties

The following tables summarize task difficulties for each grade band in writing. Writing task difficulties range from .27 to .68.

Writing Tasks Grade Band 3/4

The most difficult tasks in the 3/4 Grade Band are Copy Letters and Write Own Name, with success rates of approximately 61%. The easiest task in the 3/4 Grade Band is Matching and Sequencing Pictures, with a success rate of approximately 65%.

Task Name	*p*
Copy Letters	.61
Copy Words	.56
Write Own Name	.61
Matching and Sequencing Pictures	.65

Writing Tasks Grade Band 5/6

The most difficult task in the 5/6 Grade Band is Write a Sentence, with a success rate of approximately 27%. The easiest task in the 5/6 Grade Band is Write Own Name, with a success rate of approximately 64%.

Task Name	*p*
Copy Sentences	.54
Write Own Name	.64
Write Words from Dictation	.43
Write a Sentence	.27

Writing Tasks Grade Band 7/8

The most difficult task in the 7/8 Grade Band is Write a Sentence, with a success rate of approximately 34%. The easiest task in the 7/8 Grade Band is Revise Sentences, with a success rate of approximately 68%.

Task Name	*p*
Write Sentences from Dictation	.40
Conventions of Standard English	.55
Communicate Ideas Using Words	.61
Write a Sentence	.34
Revise Sentences	.68

Writing Tasks Grade Band 9/10

The most difficult task in the 9/10 Grade Band is Write a Story, with a success rate of approximately 36%. The easiest task in the 9/10 Grade Band is Revise Writing, with a success rate of approximately 66%.

Task Name	*p*
Revise Sentences	.63
Write a Story	.36
Revise Writing	.66

Mathematics Task Difficulties

The following tables summarize task difficulties for each grade band in mathematics. Mathematics task difficulties range from .27 to .91.

Mathematics Tasks Grade Band 3/4

The most difficult task in the 3/4 Grade Band is First and Last, with a success rate of approximately 52%. The easiest task in the 3/4 Grade Band is Identify Shapes, with a success rate of 73%.

Task Name	*p*
Copy Numbers	.61
First and Last	.52
Count	.76
Same and Different	.57
Identify Shapes	.73

Mathematics Tasks Grade Band 5/6

The most difficult task in the 5/6 Grade Band is Identify Perimeter, with a success rate of approximately 35%. The easiest tasks in the 5/6 Grade Band are Identify Shapes, and Same or Different (Shapes), both with success rates of approximately 80%.

Task Name	*p*
Read & Write Numbers	.75
Number Line	.58
Count Objects	.71
Count	.76
Simple Addition	.54
Reproduce Simple Patterns	.68
Read Simple Graphs	.58
Shorter, Longer	.64
Identify Money	.72
Identify Shapes	.80
Same or Different (Shapes)	.80
Identify Perimeter	.35

Mathematics Tasks Grade Band 7/8

The most difficult task in the 7/8 Grade Band is Identify Perimeter, with a success rate of approximately 30%. The easiest tasks in the 7/8 Grade Band are Identify Money, and Identify Shapes/Position, both with success rates of approximately 86%.

Task Name	*p*
Read & Write Numbers, ID Place Value	.54
Identify Fractions	.56
Number Line	.54
Identify Skip Patterns	.46
Count	.73
Double Digit Addition & Subtraction	.53
Reproduce & Extend Simple Patterns	.60
Label a Set as None or Zero	.76
Understand Symbols	.60
Read Simple Graphs	.59
Identify Units of Measurement	.56
Count Money	.46
Identify Money	.86
Identify Shapes/Position	.86
Match Shapes	.91
Identify Perimeter	.30

Mathematics Tasks Grade Band 9/10

The most difficult task in the 9/10 Grade Band is Identify Perimeter, with a success rate of approximately 27%. The easiest task in the 9/10 Grade Band is Shapes, Greater Than, Less Than, Equal To, with a success rate of approximately 82%.

Task Name	*p*
Identify Place Value	.57
Identify Fractions	.60
Order Numbers	.68
Round Numbers	.54
Double-Digit Addition/Subtraction & Single-Digit Multiplication	.53
Extend a Pattern/Supply Missing Element	.74
Understand Symbols	.57
Read Simple Graphs	.67
Identify Units of Measurement	.65
Count Money	.59
Describe & Compare Shapes	.70
Shapes, Greater Than, Less Than, Equal To	.82
Lines of Symmetry	.55
Identify Perimeter	.27

Science Task Difficulties

The following tables summarize task difficulties for each grade band in science. Science task difficulties range from .55 to .76.

Science Tasks Grade 4

The most difficult task in Grade 4 is Concepts of Physical Science, with a success rate of approximately 55%. The easiest task in Grade 4 is Concepts of Earth Science, with a success rate of approximately 61%.

Task Name	*p*
Concepts of Physical Science	.55
Concepts of Life Science	.57
Concepts of Earth Science	.61
History and Nature of Science, Science and Technology	.57

Science Tasks Grade 8

The most difficult task in Grade 8 is Concepts of Physical Science, with a success rate of approximately 55%. The easiest task in Grade 8 is Science and Technology, with a success rate of approximately 76%.

Task Name	*p*
Concepts of Physical Science	.55
Concepts of Life Science	.61
Concepts of Earth Science	.64
Science and Technology	.76

Science Tasks Grade 10

The most difficult task in Grade 10 is Concepts of Life Science, with a success rate of approximately 60%. The easiest task in Grade 10 is Science and Technology, with a success rate of approximately 69%.

Task Name	*p*
Concepts of Physical Science	.62
Concepts of Life Science	.60
Concepts of Earth Science	.63
Science and Technology	.69

Item Difficulty Analyses (Standard, No ELOS)

All item difficulty statistics for reading, writing, mathematics, and science are presented in the tables below. Item labels are provided, as are *p*-values. The *p*-value represents the proportion of the students responding in the keyed direction (e.g., students who received partial or full credit, with students receiving full credit contributing more significantly to the rating). The variable '*p*' is an index of item difficulty, with lower numbers indicating lower rates of success.

Reading Item Difficulties

The following tables summarize item difficulties for each grade band in reading. Reading item difficulties range from .14 to .90.

Reading Items Grade Band 3/4

The most difficult item in the 3/4 Grade Band is 1.34A, Item 1, with a success rate of approximately 22%. The easiest item in the 3/4 Grade Band is 1.34D, Item 1, with a success rate of approximately 85%.

Item Description	*p*
Reading_Grade_3/4_Task_1.34A_Identify_Signs_and_Symbols_Item_1	.22
Reading_Grade_3/4_Task_1.34A_Identify_Signs_and_Symbols_Item_2	.36
Reading_Grade_3/4_Task_1.34A_Identify_Signs_and_Symbols_Item_3	.48
Reading_Grade_3/4_Task_1.34A_Identify_Signs_and_Symbols_Item_4	.68
Reading_Grade_3/4_Task_1.34A_Identify_Signs_and_Symbols_Item_5	.78
Reading_Grade_3/4_Task_1.34A_Identify_Signs_and_Symbols_Item_6	.62
Reading_Grade_3/4_Task_1.34A_Identify_Signs_and_Symbols_Item_7	.29
Reading_Grade_3/4_Task_1.34A_Identify_Signs_and_Symbols_Item_8	.36
Reading_Grade_3/4_Task_1.34B_Identify_Letter_Sounds_Item_1	.67
Reading_Grade_3/4_Task_1.34B_Identify_Letter_Sounds_Item_2	.54
Reading_Grade_3/4_Task_1.34B_Identify_Letter_Sounds_Item_3	.56
Reading_Grade_3/4_Task_1.34B_Identify_Letter_Sounds_Item_4	.70
Reading_Grade_3/4_Task_1.34B_Identify_Letter_Sounds_Item_5	.78
Reading_Grade_3/4_Task_1.34B_Identify_Letter_Sounds_Item_6	.75
Reading_Grade_3/4_Task_1.34B_Identify_Letter_Sounds_Item_7	.63
Reading_Grade_3/4_Task_1.34B_Identify_Letter_Sounds_Item_8	.31
Reading_Grade_3/4_Task_1.34B_Identify_Letter_Sounds_Item_9	.64
Reading_Grade_3/4_Task_1.34B_Identify_Letter_Sounds_Item_10	.77
Reading_Grade_3/4_Task_1.34C_Blend_Sounds_Item_1	.59
Reading_Grade_3/4_Task_1.34C_Blend_Sounds_Item_2	.57
Reading_Grade_3/4_Task_1.34C_Blend_Sounds_Item_3	.65
Reading_Grade_3/4_Task_1.34C_Blend_Sounds_Item_4	.66

Item Description	*p*
Reading_Grade_3/4_Task_1.34C_Blend_Sounds_Item_5	.63
Reading_Grade_3/4_Task_1.34C_Blend_Sounds_Item_6	.61
Reading_Grade_3/4_Task_1.34C_Blend_Sounds_Item_7	.59
Reading_Grade_3/4_Task_1.34C_Blend_Sounds_Item_8	.71
Reading_Grade_3/4_Task_1.34D_Identify_Own_Name_Item_1	.85
Reading_Grade_3/4_Task_2.34A_Read_Passages:_Story_1,_Annie_Goes_to_a_Party_Item_1	.66
Reading_Grade_3/4_Task_2.34A_Read_Passages:_Story_1,_Annie_Goes_to_a_Party_Item_2	.39
Reading_Grade_3/4_Task_2.34A_Read_Passages:_Story_1,_Annie_Goes_to_a_Party_Item_3	.54
Reading_Grade_3/4_Task_2.34A_Read_Passages:_Story_1,_Annie_Goes_to_a_Party_Item_4	.62
Reading_Grade_3/4_Task_2.34B_Read_Passages:_Story_2,_Jimmy_Rides_the_Bus_Item_1	.56
Reading_Grade_3/4_Task_2.34B_Read_Passages:_Story_2,_Jimmy_Rides_the_Bus_Item_2	.73
Reading_Grade_3/4_Task_2.34B_Read_Passages:_Story_2,_Jimmy_Rides_the_Bus_Item_3	.70
Reading_Grade_3/4_Task_2.34B_Read_Passages:_Story_2,_Jimmy_Rides_the_Bus_Item_4	.46
Reading_Grade_3/4_Task_2.34B_Read_Passages:_Story_2,_Jimmy_Rides_the_Bus_Item_5	.66
Reading_Grade_3/4_Task_2.34B_Read_Passages:_Story_2,_Jimmy_Rides_the_Bus_Item_6	.62
Reading_Grade_3/4_Task_2.34B_Read_Passages:_Story_2,_Jimmy_Rides_the_Bus_Item_7	.64
Reading_Grade_3/4_Task_2.34B_Read_Passages:_Story_2,_Jimmy_Rides_the_Bus_Item_8	.61

Reading Items Grade Band 5/6

The most difficult item in the 5/6 Grade Band is 2.56C, Item 2, with a success rate of approximately 35%. The easiest item in the 5/6 Grade Band is 2/56B, Item 5, with a success rate of approximately 90%.

Item Description	*p*
Reading_Grade_5/6_Task_1.56A_Read_Words_Item_1	.68
Reading_Grade_5/6_Task_1.56A_Read_Words_Item_2	.61
Reading_Grade_5/6_Task_1.56A_Read_Words_Item_3	.60
Reading_Grade_5/6_Task_1.56A_Read_Words_Item_4	.67
Reading_Grade_5/6_Task_1.56A_Read_Words_Item_5	.64

Item Description	*p*
Reading_Grade_5/6_Task_1.56A_Read_Words_Item_6	.53
Reading_Grade_5/6_Task_1.56A_Read_Words_Item_7	.48
Reading_Grade_5/6_Task_1.56A_Read_Words_Item_8	.60
Reading_Grade_5/6_Task_1.56B_Read_Sentences_Item_1	.58
Reading_Grade_5/6_Task_1.56B_Read_Sentences_Item_2	.65
Reading_Grade_5/6_Task_1.56B_Read_Sentences_Item_3	.55
Reading_Grade_5/6_Task_1.56B_Read_Sentences_Item_4	.61
Reading_Grade_5/6_Task_1.56B_Read_Sentences_Item_5	.57
Reading_Grade_5/6_Task_2.56A_Read_Passages:_Story_1,_Jill_and_the_Zoo_Item_1	.82
Reading_Grade_5/6_Task_2.56A_Read_Passages:_Story_1,_Jill_and_the_Zoo_Item_2	.56
Reading_Grade_5/6_Task_2.56A_Read_Passages:_Story_1,_Jill_and_the_Zoo_Item_3	.51
Reading_Grade_5/6_Task_2.56A_Read_Passages:_Story_1,_Jill_and_the_Zoo_Item_4	.72
Reading_Grade_5/6_Task_2.56A_Read_Passages:_Story_1,_Jill_and_the_Zoo_Item_5	.60
Reading_Grade_5/6_Task_2.56A_Read_Passages:_Story_1,_Jill_and_the_Zoo_Item_6	.54
Reading_Grade_5/6_Task_2.56A_Read_Passages:_Story_1,_Jill_and_the_Zoo_Item_7	.52
Reading_Grade_5/6_Task_2.56A_Read_Passages:_Story_1,_Jill_and_the_Zoo_Item_8	.60
Reading_Grade_5/6_Task_2.56A_Read_Passages:_Story_1,_Jill_and_the_Zoo_Item_9	.61
Reading_Grade_5/6_Task_2.56A_Read_Passages:_Story_1,_Jill_and_the_Zoo_Item_10	.64
Reading_Grade_5/6_Task_2.56A_Read_Passages:_Story_1,_Jill_and_the_Zoo_Item_11	.69
Reading_Grade_5/6_Task_2.56A_Read_Passages:_Story_1,_Jill_and_the_Zoo_Item_12	.57
Reading_Grade_5/6_Task_2.56B_Read_Passages:_Story_2,_Jimmy_Rides_the_Bus_Item_1	.87
Reading_Grade_5/6_Task_2.56B_Read_Passages:_Story_2,_Jimmy_Rides_the_Bus_Item_2	.62
Reading_Grade_5/6_Task_2.56B_Read_Passages:_Story_2,_Jimmy_Rides_the_Bus_Item_3	.61
Reading_Grade_5/6_Task_2.56B_Read_Passages:_Story_2,_Jimmy_Rides_the_Bus_Item_4	.73
Reading_Grade_5/6_Task_2.56B_Read_Passages:_Story_2,_Jimmy_Rides_the_Bus_Item_5	.90

Item Description	*p*
Reading_Grade_5/6_Task_2.56B_Read_Passages:_Story_2,_Jimmy_Rides_the_Bus_Item_6	.77
Reading_Grade_5/6_Task_2.56B_Read_Passages:_Story_2,_Jimmy_Rides_the_Bus_Item_7	.80
Reading_Grade_5/6_Task_2.56B_Read_Passages:_Story_2,_Jimmy_Rides_the_Bus_Item_8	.70
Reading_Grade_5/6_Task_2.56C_Fact/Opinion:_Story_2,_Jimmy_Rides_the_Bus_Item_1	.53
Reading_Grade_5/6_Task_2.56C_Fact/Opinion:_Story_2,_Jimmy_Rides_the_Bus_Item_2	.35

Grade Band 7/8

The most difficult item in the 7/8 Grade Band is 1.78B, Item 5, with a success rate of approximately 14%. The easiest item in the 7/8 Grade Band is 2.78B, Item 1, with a success rate of approximately 77%.

Item Description	*p*
Reading_Grade_7/8_Task_1.78A_Read_Words_of_Increasing_Complexity_Item_1	.63
Reading_Grade_7/8_Task_1.78A_Read_Words_of_Increasing_Complexity_Item_2	.53
Reading_Grade_7/8_Task_1.78A_Read_Words_of_Increasing_Complexity_Item_3	.64
Reading_Grade_7/8_Task_1.78A_Read_Words_of_Increasing_Complexity_Item_4	.68
Reading_Grade_7/8_Task_1.78B_Obtain_Information_Item_1	.34
Reading_Grade_7/8_Task_1.78B_Obtain_Information_Item_2	.47
Reading_Grade_7/8_Task_1.78B_Obtain_Information_Item_3	.30
Reading_Grade_7/8_Task_1.78B_Obtain_Information_Item_4	.45
Reading_Grade_7/8_Task_1.78B_Obtain_Information_Item_5	.14
Reading_Grade_7/8_Task_1.78B_Obtain_Information_Item_6	.56
Reading_Grade_7/8_Task_1.78B_Obtain_Information_Item_7	.17
Reading_Grade_7/8_Task_1.78C_Read_Sentences_Item_1	.61
Reading_Grade_7/8_Task_1.78C_Read_Sentences_Item_2	.54
Reading_Grade_7/8_Task_1.78C_Read_Sentences_Item_3	.64
Reading_Grade_7/8_Task_1.78C_Read_Sentences_Item_4	.71
Reading_Grade_7/8_Task_2.78A_Read_Passages:_Story_1,_A_Day_At_The_Lake_Item_1	.73
Reading_Grade_7/8_Task_2.78A_Read_Passages:_Story_1,_A_Day_At_The_Lake_Item_2	.69
Reading_Grade_7/8_Task_2.78A_Read_Passages:_Story_1,_A_Day_At_The_Lake_Item_3	.69

Item Description	*p*
Reading_Grade_7/8_Task_2.78A_Read_Passages:_Story_1,_A_Day_At_The_Lake_Item_4	.79
Reading_Grade_7/8_Task_2.78A_Read_Passages:_Story_1,_A_Day_At_The_Lake_Item_5	.80
Reading_Grade_7/8_Task_2.78A_Read_Passages:_Story_1,_A_Day_At_The_Lake_Item_6	.63
Reading_Grade_7/8_Task_2.78A_Read_Passages:_Story_1,_A_Day_At_The_Lake_Item_7	.64
Reading_Grade_7/8_Task_2.78A_Read_Passages:_Story_1,_A_Day_At_The_Lake_Item_8	.73
Reading_Grade_7/8_Task_2.78B_Read_Passages:_Story_2,_Going_to_the_City_Item_1	.77
Reading_Grade_7/8_Task_2.78B_Read_Passages:_Story_2,_Going_to_the_City_Item_2	.71
Reading_Grade_7/8_Task_2.78B_Read_Passages:_Story_2,_Going_to_the_City_Item_3	.74
Reading_Grade_7/8_Task_2.78B_Read_Passages:_Story_2,_Going_to_the_City_Item_4	.62
Reading_Grade_7/8_Task_2.78B_Read_Passages:_Story_2,_Going_to_the_City_Item_5	.60
Reading_Grade_7/8_Task_2.78B_Read_Passages:_Story_2,_Going_to_the_City_Item_6	.55
Reading_Grade_7/8_Task_2.78B_Read_Passages:_Story_2,_Going_to_the_City_Item_7	.58
Reading_Grade_7/8_Task_2.78B_Read_Passages:_Story_2,_Going_to_the_City_Item_8	.59
Reading_Grade_7/8_Task_2.78B_Read_Passages:_Story_2,_Going_to_the_City_Item_9	.49
Reading_Grade_7/8_Task_2.78B_Read_Passages:_Story_2,_Going_to_the_City_Item_10	.63
Reading_Grade_7/8_Task_2.78B_Read_Passages:_Story_2,_Going_to_the_City_Item_11	.63
Reading_Grade_7/8_Task_2.78B_Read_Passages:_Story_2,_Going_to_the_City_Item_12	.57

Reading Items Grade Band 9/10

The most difficult item in the 9/10 Grade Band is 2.910C, Item 12, with a success rate of approximately 38%. The easiest item is 1.910A, Item 7, with a success rate of approximately 78%.

Item Description	*p*
Reading_Grade_9/10_Task_1.910A_Decode_Words_Item_1	.64
Reading_Grade_9/10_Task_1.910A_Decode_Words_Item_2	.53
Reading_Grade_9/10_Task_1.910A_Decode_Words_Item_3	.64

Item Description	*p*
Reading_Grade_9/10_Task_1.910A_Decode_Words_Item_4	.70
Reading_Grade_9/10_Task_1.910A_Decode_Words_Item_5	.68
Reading_Grade_9/10_Task_1.910A_Decode_Words_Item_6	.54
Reading_Grade_9/10_Task_1.910A_Decode_Words_Item_7	.78
Reading_Grade_9/10_Task_1.910A_Decode_Words_Item_8	.71
Reading_Grade_9/10_Task_1.910B_Identify_Root_Words_Item_1	.54
Reading_Grade_9/10_Task_1.910B_Identify_Root_Words_Item_2	.55
Reading_Grade_9/10_Task_1.910B_Identify_Root_Words_Item_3	.58
Reading_Grade_9/10_Task_1.910B_Identify_Root_Words_Item_4	.60
Reading_Grade_9/10_Task_1.910B_Identify_Root_Words_Item_5	.61
Reading_Grade_9/10_Task_1.910B_Identify_Root_Words_Item_6	.65
Reading_Grade_9/10_Task_1.910C_Follow_Multi-Step_Directions_Item_1	.59
Reading_Grade_9/10_Task_1.910C_Follow_Multi-Step_Directions_Item_2	.53
Reading_Grade_9/10_Task_1.910C_Follow_Multi-Step_Directions_Item_3	.59
Reading_Grade_9/10_Task_2.910A_Read_Passages:_Story_1,_Mount_St._Helens_Item_1	.64
Reading_Grade_9/10_Task_2.910A_Read_Passages:_Story_1,_Mount_St._Helens_Item_2	.69
Reading_Grade_9/10_Task_2.910A_Read_Passages:_Story_1,_Mount_St._Helens_Item_3	.49
Reading_Grade_9/10_Task_2.910A_Read_Passages:_Story_1,_Mount_St._Helens_Item_4	.76
Reading_Grade_9/10_Task_2.910A_Read_Passages:_Story_1,_Mount_St._Helens_Item_5	.70
Reading_Grade_9/10_Task_2.910A_Read_Passages:_Story_1,_Mount_St._Helens_Item_6	.75
Reading_Grade_9/10_Task_2.910A_Read_Passages:_Story_1,_Mount_St._Helens_Item_7	.76
Reading_Grade_9/10_Task_2.910A_Read_Passages:_Story_1,_Mount_St._Helens_Item_8	.60
Reading_Grade_9/10_Task_2.910A_Read_Passages:_Story_1,_Mount_St._Helens_Item_9	.41
Reading_Grade_9/10_Task_2.910A_Read_Passages:_Story_1,_Mount_St._Helens_Item_10	.42
Reading_Grade_9/10_Task_2.910B_Fact/Opinion:_Story_1,_Mount_St._Helens_Item_1	.57
Reading_Grade_9/10_Task_2.910B_Fact/Opinion:_Story_1,_Mount_St._Helens_Item_2	.55

Item Description	*p*
Reading_Grade_9/10_Task_2.910C_Read_Passages:_Story_2,_Hannah's_Homework_Item_1	.61
Reading_Grade_9/10_Task_2.910C_Read_Passages:_Story_2,_Hannah's_Homework_Item_2	.68
Reading_Grade_9/10_Task_2.910C_Read_Passages:_Story_2,_Hannah's_Homework_Item_3	.64
Reading_Grade_9/10_Task_2.910C_Read_Passages:_Story_2,_Hannah's_Homework_Item_4	.72
Reading_Grade_9/10_Task_2.910C_Read_Passages:_Story_2,_Hannah's_Homework_Item_5	.76
Reading_Grade_9/10_Task_2.910C_Read_Passages:_Story_2,_Hannah's_Homework_Item_6	.56
Reading_Grade_9/10_Task_2.910C_Read_Passages:_Story_2,_Hannah's_Homework_Item_7	.65
Reading_Grade_9/10_Task_2.910C_Read_Passages:_Story_2,_Hannah's_Homework_Item_8	.71
Reading_Grade_9/10_Task_2.910C_Read_Passages:_Story_2,_Hannah's_Homework_Item_9	.48
Reading_Grade_9/10_Task_2.910C_Read_Passages:_Story_2,_Hannah's_Homework_Item_10	.65
Reading_Grade_9/10_Task_2.910C_Read_Passages:_Story_2,_Hannah's_Homework_Item_11	.47
Reading_Grade_9/10_Task_2.910C_Read_Passages:_Story_2,_Hannah's_Homework_Item_12	.38

Writing Item Difficulties

The following tables summarize item difficulties for each grade band in writing. Writing item difficulties range from .21 to .82.

Writing Items Grade Band 3/4

The most difficult item in the 3/4 Grade Band is 1.34B, Item 3, with a success rate of approximately 54%. The easiest item in the 3/4 Grade Band is 1.34A, Item 6, with a success rate of approximately 82%.

Item Description	*p*
Writing_Grade_3/4_Task_1.34A_Copy_Letters_Item_1	.69
Writing_Grade_3/4_Task_1.34A_Copy_Letters_Item_2	.61
Writing_Grade_3/4_Task_1.34A_Copy_Letters_Item_3	.60
Writing_Grade_3/4_Task_1.34A_Copy_Letters_Item_4	.75
Writing_Grade_3/4_Task_1.34A_Copy_Letters_Item_5	.77
Writing_Grade_3/4_Task_1.34A_Copy_Letters_Item_6	.82
Writing_Grade_3/4_Task_1.34A_Copy_Letters_Item_7	.76
Writing_Grade_3/4_Task_1.34A_Copy_Letters_Item_8	.74

Item Description	*p*
Writing_Grade_3/4_Task_1.34A_Copy_Letters_Item_9	.70
Writing_Grade_3/4_Task_1.34A_Copy_Letters_Item_10	.77
Writing_Grade_3/4_Task_1.34A_Copy_Letters_Item_11	.67
Writing_Grade_3/4_Task_1.34B_Copy_Words_Item_1	.57
Writing_Grade_3/4_Task_1.34B_Copy_Words_Item_2	.57
Writing_Grade_3/4_Task_1.34B_Copy_Words_Item_3	.54
Writing_Grade_3/4_Task_1.34B_Copy_Words_Item_4	.65
Writing_Grade_3/4_Task_1.34B_Copy_Words_Item_5	.71
Writing_Grade_3/4_Task_1.34B_Copy_Words_Item_6	.76
Writing_Grade_3/4_Task_1.34B_Copy_Words_Item_7	.73
Writing_Grade_3/4_Task_1.34C_Write_Own_Name_Item_1	.61
Writing_Grade_3/4_Task_1.34D_Matching_and_Sequencing_Pictures_Item_1	.62
Writing_Grade_3/4_Task_1.34D_Matching_and_Sequencing_Pictures_Item_2	.68

Writing Items Grade Band 5/6

The most difficult item in the 5/6 Grade Band is 1.56D, Item 3, with a success rate of approximately 21%. The easiest item in the 5/6 Grade Band is 1.56B, Item 1, with a success rate of approximately 64%.

Item Description	*p*
Writing_Grade_5/6_Task_1.56A_Copy_Sentences_Item_1	.53
Writing_Grade_5/6_Task_1.56A_Copy_Sentences_Item_2	.55
Writing_Grade_5/6_Task_1.56B_Write_Own_Name_Item_1	.64
Writing_Grade_5/6_Task_1.56C_Write_Words_from_Dictation_Item_1	.41
Writing_Grade_5/6_Task_1.56C_Write_Words_from_Dictation_Item_2	.53
Writing_Grade_5/6_Task_1.56C_Write_Words_from_Dictation_Item_3	.47
Writing_Grade_5/6_Task_1.56C_Write_Words_from_Dictation_Item_4	.42
Writing_Grade_5/6_Task_1.56C_Write_Words_from_Dictation_Item_5	.43
Writing_Grade_5/6_Task_1.56D_Write_a_Sentence_Item_1	.27
Writing_Grade_5/6_Task_1.56D_Write_a_Sentence_Item_2	.26
Writing_Grade_5/6_Task_1.56D_Write_a_Sentence_Item_3	.21

Writing Grade Band 7/8

The most difficult item in the 7/8 Grade Band is 1.78D, Item 1, with a success rate of approximately 33%. The easiest item in the 7/8 Grade Band is 1.78E, Item 2, with a success rate of approximately 75%.

Item Description	*p*
Writing_Grade_7/8_Task_1.78A_Write_Sentences_from_Dictation_Item_1	.41
Writing_Grade_7/8_Task_1.78A_Write_Sentences_from_Dictation_Item_2	.43
Writing_Grade_7/8_Task_1.78A_Write_Sentences_from_Dictation_Item_3	.35
Writing_Grade_7/8_Task_1.78B_Conventions_of_Standard_English_Item_1	.57
Writing_Grade_7/8_Task_1.78B_Conventions_of_Standard_English_Item_2	.59
Writing_Grade_7/8_Task_1.78B_Conventions_of_Standard_English_Item_3	.47
Writing_Grade_7/8_Task_1.78C_Communicate_Ideas_Using_Words_Item_1	.61
Writing_Grade_7/8_Task_1.78C_Communicate_Ideas_Using_Words_Item_2	.65
Writing_Grade_7/8_Task_1.78C_Communicate_Ideas_Using_Words_Item_3	.60
Writing_Grade_7/8_Task_1.78C_Communicate_Ideas_Using_Words_Item_4	.66
Writing_Grade_7/8_Task_1.78D_Write_a_Sentence_Item_1	.34
Writing_Grade_7/8_Task_1.78D_Write_a_Sentence_Item_2	.33
Writing_Grade_7/8_Task_1.78E_Revise_Sentences_Item_1	.67
Writing_Grade_7/8_Task_1.78E_Revise_Sentences_Item_2	.75
Writing_Grade_7/8_Task_1.78E_Revise_Sentences_Item_3	.69
Writing_Grade_7/8_Task_1.78E_Revise_Sentences_Item_4	.64

Writing Items Grade Band 9/10

The most difficult item in the 9/10 Grade Band is 1.910B, Item 1, with a success rate of approximately 36%. The easiest item is 1.910C, Item 5, with a success rate of approximately 81%.

Item Description	*p*
Writing_Grade_9/10_Task_1.910A_Revise_Sentences_Item_1	.69
Writing_Grade_9/10_Task_1.910A_Revise_Sentences_Item_2	.66
Writing_Grade_9/10_Task_1.910A_Revise_Sentences_Item_3	.65
Writing_Grade_9/10_Task_1.910A_Revise_Sentences_Item_4	.80
Writing_Grade_9/10_Task_1.910A_Revise_Sentences_Item_5	.69
Writing_Grade_9/10_Task_1.910A_Revise_Sentences_Item_6	.67
Writing_Grade_9/10_Task_1.910A_Revise_Sentences_Item_7	.66
Writing_Grade_9/10_Task_1.910B_Write_a_Story_Item_1	.36
Writing_Grade_9/10_Task_1.910C_Revise_Writing_Item_1	.77
Writing_Grade_9/10_Task_1.910C_Revise_Writing_Item_2	.64
Writing_Grade_9/10_Task_1.910C_Revise_Writing_Item_3	.60
Writing_Grade_9/10_Task_1.910C_Revise_Writing_Item_4	.76
Writing_Grade_9/10_Task_1.910C_Revise_Writing_Item_5	.81
Writing_Grade_9/10_Task_1.910C_Revise_Writing_Item_6	.69
Writing_Grade_9/10_Task_1.910C_Revise_Writing_Item_7	.74
Writing_Grade_9/10_Task_1.910C_Revise_Writing_Item_8	.78
Writing_Grade_9/10_Task_1.910C_Revise_Writing_Item_9	.78

Mathematics Item Difficulties

The following tables summarize item difficulties for each grade band in mathematics. Math item difficulties range from .08 to .92.

Mathematics Items Grade Band 3/4

The most difficult item in the 3/4 Grade Band is 1.34B, Item 2, with a success rate of approximately 38%. The easiest item in the 3/4 Grade Band is 2.34, Item 8, with a success rate of approximately 84%.

Item Description	*p*
Math_Grade_3/4_Task_1.34A_Copy_Numbers_Item_1	.57
Math_Grade_3/4_Task_1.34A_Copy_Numbers_Item_2	.71
Math_Grade_3/4_Task_1.34A_Copy_Numbers_Item_3	.57
Math_Grade_3/4_Task_1.34A_Copy_Numbers_Item_4	.72
Math_Grade_3/4_Task_1.34A_Copy_Numbers_Item_5	.73
Math_Grade_3/4_Task_1.34A_Copy_Numbers_Item_6	.76
Math_Grade_3/4_Task_1.34A_Copy_Numbers_Item_7	.78
Math_Grade_3/4_Task_1.34A_Copy_Numbers_Item_8	.69
Math_Grade_3/4_Task_1.34B_First_and_Last_Item_1	.64
Math_Grade_3/4_Task_1.34B_First_and_Last_Item_2	.38
Math_Grade_3/4_Task_1.34B_First_and_Last_Item_3	.61
Math_Grade_3/4_Task_1.34B_First_and_Last_Item_4	.73
Math_Grade_3/4_Task_1.34B_First_and_Last_Item_5	.52
Math_Grade_3/4_Task_1.34B_First_and_Last_Item_6	.57
Math_Grade_3/4_Task_1.34C_Count_Item_1	.76
Math_Grade_3/4_Task_2.34_Same_/_Different_Item_1	.61
Math_Grade_3/4_Task_2.34_Same_/_Different_Item_2	.50
Math_Grade_3/4_Task_2.34_Same_/_Different_Item_3	.63
Math_Grade_3/4_Task_2.34_Same_/_Different_Item_4	.62
Math_Grade_3/4_Task_2.34_Same_/_Different_Item_5	.76
Math_Grade_3/4_Task_2.34_Same_/_Different_Item_6	.60
Math_Grade_3/4_Task_2.34_Same_/_Different_Item_7	.70
Math_Grade_3/4_Task_2.34_Same_/_Different_Item_8	.84
Math_Grade_3/4_Task_3.34_Identify_Shapes_Item_1	.72
Math_Grade_3/4_Task_3.34_Identify_Shapes_Item_2	.75
Math_Grade_3/4_Task_3.34_Identify_Shapes_Item_3	.72

Mathematics Items Grade Band 5/6

The most difficult item in the 5/6 Grade Band is 4.6.56C, Item 1, with a success rate of approximately 35%. The easiest items in the 5/6 Grade Band are 4.56, Items 3 and 4, and 6.56A, Items 3 and 4, with success rates of approximately 85%.

Item Description	*p*
Math_Grade_5/6_Task_1.56A_Read_and_Write_Numbers_Item_1	.81
Math_Grade_5/6_Task_1.56A_Read_and_Write_Numbers_Item_2	.82
Math_Grade_5/6_Task_1.56A_Read_and_Write_Numbers_Item_3	.80
Math_Grade_5/6_Task_1.56A_Read_and_Write_Numbers_Item_4	.79
Math_Grade_5/6_Task_1.56A_Read_and_Write_Numbers_Item_5	.77
Math_Grade_5/6_Task_1.56B_Number_Line_Item_1	.69
Math_Grade_5/6_Task_1.56B_Number_Line_Item_2	.60
Math_Grade_5/6_Task_1.56B_Number_Line_Item_3	.45
Math_Grade_5/6_Task_1.56C_Count_Objects_Item_1	.71
Math_Grade_5/6_Task_1.56D_Count_Item_1	.76
Math_Grade_5/6_Task_2.56_Simple_Addition_Item_1	.62
Math_Grade_5/6_Task_2.56_Simple_Addition_Item_2	.59
Math_Grade_5/6_Task_2.56_Simple_Addition_Item_3	.50
Math_Grade_5/6_Task_2.56_Simple_Addition_Item_4	.62
Math_Grade_5/6_Task_2.56_Simple_Addition_Item_5	.65
Math_Grade_5/6_Task_2.56_Simple_Addition_Item_6	.65
Math_Grade_5/6_Task_2.56_Simple_Addition_Item_7	.59
Math_Grade_5/6_Task_3.56_Reproduce_Simple_Patterns_Item_1	.77
Math_Grade_5/6_Task_3.56_Reproduce_Simple_Patterns_Item_2	.68
Math_Grade_5/6_Task_3.56_Reproduce_Simple_Patterns_Item_3	.75
Math_Grade_5/6_Task_3.56_Reproduce_Simple_Patterns_Item_4	.75
Math_Grade_5/6_Task_3.56_Reproduce_Simple_Patterns_Item_5	.76
Math_Grade_5/6_Task_3.56_Reproduce_Simple_Patterns_Item_6	.79
Math_Grade_5/6_Task_3.56_Reproduce_Simple_Patterns_Item_7	.53
Math_Grade_5/6_Task_4.56_Read_Simple_Graphs_Item_1	.80
Math_Grade_5/6_Task_4.56_Read_Simple_Graphs_Item_2	.43
Math_Grade_5/6_Task_4.56_Read_Simple_Graphs_Item_3	.85
Math_Grade_5/6_Task_4.56_Read_Simple_Graphs_Item_4	.85
Math_Grade_5/6_Task_4.56_Read_Simple_Graphs_Item_5	.46
Math_Grade_5/6_Task_4.56_Read_Simple_Graphs_Item_6	.81
Math_Grade_5/6_Task_4.56_Read_Simple_Graphs_Item_7	.82
Math_Grade_5/6_Task_4.56_Read_Simple_Graphs_Item_8	.45
Math_Grade_5/6_Task_4.56_Read_Simple_Graphs_Item_9	.48
Math_Grade_5/6_Task_4.56_Read_Simple_Graphs_Item_10	.50
Math_Grade_5/6_Task_5.56A_Shorter,_Longer_Item_1	.65
Math_Grade_5/6_Task_5.56A_Shorter,_Longer_Item_2	.64
Math_Grade_5/6_Task_5.56B_Identify_Money_Item_1	.83
Math_Grade_5/6_Task_5.56B_Identify_Money_Item_2	.64
Math_Grade_5/6_Task_5.56B_Identify_Money_Item_3	.74
Math_Grade_5/6_Task_5.56B_Identify_Money_Item_4	.70
Math_Grade_5/6_Task_6.56A_Identify_Shapes_Item_1	.91

Item Description	*p*
Math_Grade_5/6_Task_6.56A_Identify_Shapes_Item_2	.72
Math_Grade_5/6_Task_6.56A_Identify_Shapes_Item_3	.85
Math_Grade_5/6_Task_6.56A_Identify_Shapes_Item_4	.85
Math_Grade_5/6_Task_6.56A_Identify_Shapes_Item_5	.85
Math_Grade_5/6_Task_6.56A_Identify_Shapes_Item_6	.78
Math_Grade_5/6_Task_6.56A_Identify_Shapes_Item_7	.69
Math_Grade_5/6_Task_6.56B_Same_or_Different_(Shapes)_Item_1	.92
Math_Grade_5/6_Task_6.56B_Same_or_Different_(Shapes)_Item_2	.77
Math_Grade_5/6_Task_6.56B_Same_or_Different_(Shapes)_Item_3	.72
Math_Grade_5/6_Task_6.56C_Identify_Perimeter_Item_1	.35

Mathematics Grade Band 7/8

The most difficult item for the 7/8 Grade Band is 4.78, Item 10, with a success rate of approximately 8%. The easiest items for the 7/8 Grade Band are 4.78, Item 5, and 6.78B, Item 2, with success rates of approximately 92%.

Item Description	*p*
Math_Grade_7/8_Task_1.78A_Read_and_Write_Numbers,_ID_Place_Value_Item_1	.68
Math_Grade_7/8_Task_1.78A_Read_and_Write_Numbers,_ID_Place_Value_Item_2	.72
Math_Grade_7/8_Task_1.78A_Read_and_Write_Numbers,_ID_Place_Value_Item_3	.37
Math_Grade_7/8_Task_1.78A_Read_and_Write_Numbers,_ID_Place_Value_Item_4	.50
Math_Grade_7/8_Task_1.78B_Identify_Fractions_Item_1	.71
Math_Grade_7/8_Task_1.78B_Identify_Fractions_Item_2	.40
Math_Grade_7/8_Task_1.78C_Number_Line_Item_1	.70
Math_Grade_7/8_Task_1.78C_Number_Line_Item_2	.51
Math_Grade_7/8_Task_1.78C_Number_Line_Item_3	.54
Math_Grade_7/8_Task_1.78C_Number_Line_Item_4	.55
Math_Grade_7/8_Task_1.78C_Number_Line_Item_5	.50
Math_Grade_7/8_Task_1.78D_Identify_Skip_Patterns_Item_1	.46
Math_Grade_7/8_Task_1.78E_Count_Item_1	.73
Math_Grade_7/8_Task_2.78_Double-Digit_Addition_and_Subtraction_Item_1	.55
Math_Grade_7/8_Task_2.78_Double-Digit_Addition_and_Subtraction_Item_2	.60
Math_Grade_7/8_Task_2.78_Double-Digit_Addition_and_Subtraction_Item_3	.57
Math_Grade_7/8_Task_2.78_Double-Digit_Addition_and_Subtraction_Item_4	.69

Item Description	*p*
Math_Grade_7/8_Task_2.78_Double-Digit_Addition_and_Subtraction_Item_5	.67
Math_Grade_7/8_Task_2.78_Double-Digit_Addition_and_Subtraction_Item_6	.56
Math_Grade_7/8_Task_2.78_Double-Digit_Addition_and_Subtraction_Item_7	.52
Math_Grade_7/8_Task_3.78A_Reproduce_and_Extend_Simple_Patterns_Item_1	.79
Math_Grade_7/8_Task_3.78A_Reproduce_and_Extend_Simple_Patterns_Item_2	.74
Math_Grade_7/8_Task_3.78A_Reproduce_and_Extend_Simple_Patterns_Item_3	.32
Math_Grade_7/8_Task_3.78B_Label_a_Set_as_None_or_Zero_Item_1	.75
Math_Grade_7/8_Task_3.78B_Label_a_Set_as_None_or_Zero_Item_2	.76
Math_Grade_7/8_Task_3.78B_Label_a_Set_as_None_or_Zero_Item_3	.77
Math_Grade_7/8_Task_3.78B_Label_a_Set_as_None_or_Zero_Item_4	.78
Math_Grade_7/8_Task_3.78C_Understand_Symbols_Item_1	.62
Math_Grade_7/8_Task_3.78C_Understand_Symbols_Item_2	.57
Math_Grade_7/8_Task_4.78_Read_Simple_Graphs_Item_1	.37
Math_Grade_7/8_Task_4.78_Read_Simple_Graphs_Item_2	.72
Math_Grade_7/8_Task_4.78_Read_Simple_Graphs_Item_3	.91
Math_Grade_7/8_Task_4.78_Read_Simple_Graphs_Item_4	.76
Math_Grade_7/8_Task_4.78_Read_Simple_Graphs_Item_5	.92
Math_Grade_7/8_Task_4.78_Read_Simple_Graphs_Item_6	.78
Math_Grade_7/8_Task_4.78_Read_Simple_Graphs_Item_7	.60
Math_Grade_7/8_Task_4.78_Read_Simple_Graphs_Item_8	.60
Math_Grade_7/8_Task_4.78_Read_Simple_Graphs_Item_9	.68
Math_Grade_7/8_Task_4.78_Read_Simple_Graphs_Item_10	.08
Math_Grade_7/8_Task_5.78A_Identify_Units_of_Measurement_Item_1	.59
Math_Grade_7/8_Task_5.78A_Identify_Units_of_Measurement_Item_2	.61
Math_Grade_7/8_Task_5.78A_Identify_Units_of_Measurement_Item_3	.65
Math_Grade_7/8_Task_5.78A_Identify_Units_of_Measurement_Item_4	.48
Math_Grade_7/8_Task_5.78A_Identify_Units_of_Measurement_Item_5	.59
Math_Grade_7/8_Task_5.78A_Identify_Units_of_Measurement_Item_6	.61
Math_Grade_7/8_Task_5.78A_Identify_Units_of_Measurement_Item_7	.45
Math_Grade_7/8_Task_5.78A_Identify_Units_of_Measurement_Item_8	.65
Math_Grade_7/8_Task_5.78A_Identify_Units_of_Measurement_Item_9	.47
Math_Grade_7/8_Task_5.78B_Count_Money_Item_1	.50
Math_Grade_7/8_Task_5.78B_Count_Money_Item_2	.43
Math_Grade_7/8_Task_5.78C_Identify_Money_Item_1	.89
Math_Grade_7/8_Task_5.78C_Identify_Money_Item_2	.87
Math_Grade_7/8_Task_5.78C_Identify_Money_Item_3	.85

Item Description	*p*
Math_Grade_7/8_Task_5.78C_Identify_Money_Item_4	.84
Math_Grade_7/8_Task_6.78A_Identify_Shapes/Position_Item_1	.82
Math_Grade_7/8_Task_6.78A_Identify_Shapes/Position_Item_2	.87
Math_Grade_7/8_Task_6.78A_Identify_Shapes/Position_Item_3	.87
Math_Grade_7/8_Task_6.78A_Identify_Shapes/Position_Item_4	.90
Math_Grade_7/8_Task_6.78A_Identify_Shapes/Position_Item_5	.85
Math_Grade_7/8_Task_6.78A_Identify_Shapes/Position_Item_6	.88
Math_Grade_7/8_Task_6.78A_Identify_Shapes/Position_Item_7	.87
Math_Grade_7/8_Task_6.78A_Identify_Shapes/Position_Item_8	.85
Math_Grade_7/8_Task_6.78B_Match_Shapes_Item_1	.91
Math_Grade_7/8_Task_6.78B_Match_Shapes_Item_2	.92
Math_Grade_7/8_Task_6.78B_Match_Shapes_Item_3	.91
Math_Grade_7/8_Task_6.78C_Identify_Perimeter_Item_1	.30

Mathematics Items Grade Band 9/10

The most difficult item in the 9/10 Grade Band is 6.910A, Item 5, with a success rate of approximately 19%. The easiest item in the 9/10 Grade Band is 6.910A, Item 1, with a success rate of approximately 90%.

Item Description	*p*
Math_Grade_9/10_Task_1.910A_Identify_Place_Value_Item_1	.54
Math_Grade_9/10_Task_1.910A_Identify_Place_Value_Item_2	.55
Math_Grade_9/10_Task_1.910A_Identify_Place_Value_Item_3	.56
Math_Grade_9/10_Task_1.910A_Identify_Place_Value_Item_4	.73
Math_Grade_9/10_Task_1.910A_Identify_Place_Value_Item_5	.68
Math_Grade_9/10_Task_1.910B_Identify_Fractions_Item_1	.73
Math_Grade_9/10_Task_1.910B_Identify_Fractions_Item_2	.55
Math_Grade_9/10_Task_1.910B_Identify_Fractions_Item_3	.54
Math_Grade_9/10_Task_1.910B_Identify_Fractions_Item_4	.64
Math_Grade_9/10_Task_1.910C_Order_Numbers_Item_1	.68
Math_Grade_9/10_Task_2.910A_Round_Numbers_Item_1	.60
Math_Grade_9/10_Task_2.910A_Round_Numbers_Item_2	.50
Math_Grade_9/10_Task_2.910A_Round_Numbers_Item_3	.52
Math_Grade_9/10_Task_2.910B_Double-Digit_Addition/Subtraction,_and_Single-Digit_Multiplication_Item_1	.60
Math_Grade_9/10_Task_2.910B_Double-Digit_Addition/Subtraction,_and_Single-Digit_Multiplication_Item_2	.62
Math_Grade_9/10_Task_2.910B_Double-Digit_Addition/Subtraction,_and_Single-Digit_Multiplication_Item_3	.51
Math_Grade_9/10_Task_2.910B_Double-Digit_Addition/Subtraction,_and_Single-Digit_Multiplication_Item_4	.53

Item Description	*p*
Math_Grade_9/10_Task_2.910B_Double-Digit_Addition/Subtraction,_and_Single-Digit_Multiplication_Item_5	.58
Math_Grade_9/10_Task_2.910B_Double-Digit_Addition/Subtraction,_and_Single-Digit_Multiplication_Item_6	.57
Math_Grade_9/10_Task_3.910A_Extend_a_Pattern/Supply_Missing_Element_Item_1	.85
Math_Grade_9/10_Task_3.910A_Extend_a_Pattern/Supply_Missing_Element_Item_2	.82
Math_Grade_9/10_Task_3.910A_Extend_a_Pattern/Supply_Missing_Element_Item_3	.81
Math_Grade_9/10_Task_3.910A_Extend_a_Pattern/Supply_Missing_Element_Item_4	.80
Math_Grade_9/10_Task_3.910A_Extend_a_Pattern/Supply_Missing_Element_Item_5	.70
Math_Grade_9/10_Task_3.910A_Extend_a_Pattern/Supply_Missing_Element_Item_6	.63
Math_Grade_9/10_Task_3.910B_Understand_Symbols_Item_1	.64
Math_Grade_9/10_Task_3.910B_Understand_Symbols_Item_2	.59
Math_Grade_9/10_Task_3.910B_Understand_Symbols_Item_3	.52
Math_Grade_9/10_Task_3.910B_Understand_Symbols_Item_4	.56
Math_Grade_9/10_Task_4.910_Read_Simple_Graphs_Item_1	.56
Math_Grade_9/10_Task_4.910_Read_Simple_Graphs_Item_2	.77
Math_Grade_9/10_Task_4.910_Read_Simple_Graphs_Item_3	.57
Math_Grade_9/10_Task_4.910_Read_Simple_Graphs_Item_4	.81
Math_Grade_9/10_Task_4.910_Read_Simple_Graphs_Item_5	.84
Math_Grade_9/10_Task_4.910_Read_Simple_Graphs_Item_6	.68
Math_Grade_9/10_Task_4.910_Read_Simple_Graphs_Item_7	.83
Math_Grade_9/10_Task_4.910_Read_Simple_Graphs_Item_8	.62
Math_Grade_9/10_Task_4.910_Read_Simple_Graphs_Item_9	.71
Math_Grade_9/10_Task_4.910_Read_Simple_Graphs_Item_10	.70
Math_Grade_9/10_Task_5.910A_Identify_Units_of_Measurement_Item_1	.67
Math_Grade_9/10_Task_5.910A_Identify_Units_of_Measurement_Item_2	.56
Math_Grade_9/10_Task_5.910A_Identify_Units_of_Measurement_Item_3	.63
Math_Grade_9/10_Task_5.910A_Identify_Units_of_Measurement_Item_4	.74
Math_Grade_9/10_Task_5.910A_Identify_Units_of_Measurement_Item_5	.74
Math_Grade_9/10_Task_5.910A_Identify_Units_of_Measurement_Item_6	.76
Item Description	*p*
Math_Grade_9/10_Task_5.910A_Identify_Units_of_Measurement_Item_7	.66
Math_Grade_9/10_Task_5.910A_Identify_Units_of_Measurement_Item_8	.78
Math_Grade_9/10_Task_5.910A_Identify_Units_of_Measurement_Item_9	.62
Math_Grade_9/10_Task_5.910B_Count_Money_Item_1	.64

Math_Grade_9/10_Task_5.910B_Count_Money_Item_2	.71
Math_Grade_9/10_Task_5.910B_Count_Money_Item_3	.52
Math_Grade_9/10_Task_6.910A_Describe_and_Compare_Shapes_Item_1	.90
Math_Grade_9/10_Task_6.910A_Describe_and_Compare_Shapes_Item_2	.78
Item Description	*p*
Math_Grade_9/10_Task_6.910A_Describe_and_Compare_Shapes_Item_3	.68
Math_Grade_9/10_Task_6.910A_Describe_and_Compare_Shapes_Item_4	.79
Math_Grade_9/10_Task_6.910A_Describe_and_Compare_Shapes_Item_5	.19
Math_Grade_9/10_Task_6.910A_Describe_and_Compare_Shapes_Item_6	.90
Math_Grade_9/10_Task_6.910A_Describe_and_Compare_Shapes_Item_7	.82
Math_Grade_9/10_Task_6.910A_Describe_and_Compare_Shapes_Item_8	.80
Math_Grade_9/10_Task_6.910B_Shapes_Greater_Than,_Less_Than,_Equal_To_Item_1	.77
Math_Grade_9/10_Task_6.910B_Shapes_Greater_Than,_Less_Than,_Equal_To_Item_2	.82
Math_Grade_9/10_Task_6.910B_Shapes_Greater_Than,_Less_Than,_Equal_To_Item_3	.86
Math_Grade_9/10_Task_6.910C_Lines_of_Symmetry_Item_1	.50
Math_Grade_9/10_Task_6.910C_Lines_of_Symmetry_Item_2	.59
Math_Grade_9/10_Task_6.910D_Identify_Perimeter_Item_1	.27

Science Item Difficulties

The following tables summarize item difficulties for each grade band in science. Science item difficulties range .28 to .91.

Science Items Grade 4

The most difficult item in Grade 4 is 4.4, Item 5, with a success rate of approximately 28%. The easiest item in Grade 4 is 4.4, Item 4, with a success rate of approximately 90%.

Item Description	*p*
Science_Grade_4_Task_1.4_Concepts_of_Physical_Science_Item_1	.72
Science_Grade_4_Task_1.4_Concepts_of_Physical_Science_Item_2	.52
Science_Grade_4_Task_1.4_Concepts_of_Physical_Science_Item_3	.70
Science_Grade_4_Task_1.4_Concepts_of_Physical_Science_Item_4	.43
Science_Grade_4_Task_1.4_Concepts_of_Physical_Science_Item_5	.69
Science_Grade_4_Task_1.4_Concepts_of_Physical_Science_Item_6	.43
Science_Grade_4_Task_2.4_Concepts_of_Life_Science_Item_1	.63
Science_Grade_4_Task_2.4_Concepts_of_Life_Science_Item_2	.61
Science_Grade_4_Task_2.4_Concepts_of_Life_Science_Item_3	.75
Science_Grade_4_Task_2.4_Concepts_of_Life_Science_Item_4	.66
Science_Grade_4_Task_2.4_Concepts_of_Life_Science_Item_5	.53
Science_Grade_4_Task_2.4_Concepts_of_Life_Science_Item_6	.50
Science_Grade_4_Task_3.4_Concepts_of_Earth_Science_Item_1	.66
Science_Grade_4_Task_3.4_Concepts_of_Earth_Science_Item_2	.79
Science_Grade_4_Task_3.4_Concepts_of_Earth_Science_Item_3	.72
Science_Grade_4_Task_3.4_Concepts_of_Earth_Science_Item_4	.63
Science_Grade_4_Task_3.4_Concepts_of_Earth_Science_Item_5	.33
Science_Grade_4_Task_3.4_Concepts_of_Earth_Science_Item_6	.79
Science_Grade_4_Task_4.4_History_and_Nature_of_Science,_Science_and_Technology_Item_1	.64
Science_Grade_4_Task_4.4_History_and_Nature_of_Science,_Science_and_Technology_Item_2	.58
Science_Grade_4_Task_4.4_History_and_Nature_of_Science,_Science_and_Technology_Item_3	.56
Science_Grade_4_Task_4.4_History_and_Nature_of_Science,_Science_and_Technology_Item_4	.90
Science_Grade_4_Task_4.4_History_and_Nature_of_Science,_Science_and_Technology_Item_5	.28
Science_Grade_4_Task_4.4_History_and_Nature_of_Science,_Science_and_Technology_Item_6	.55

Science Items Grade 8

The most difficult item in Grade 8 is 1.8, Item 5, with a success rate of approximately 39%. The easiest item in Grade 8 is 4.8, Item 1, with a success rate of approximately 91%.

Item Description	*p*
Science_Grade_8_Task_1.8_Concepts_of_Physical_Science_Item_1	.52
Science_Grade_8_Task_1.8_Concepts_of_Physical_Science_Item_2	.81
Science_Grade_8_Task_1.8_Concepts_of_Physical_Science_Item_3	.40
Science_Grade_8_Task_1.8_Concepts_of_Physical_Science_Item_4	.66
Science_Grade_8_Task_1.8_Concepts_of_Physical_Science_Item_5	.39
Science_Grade_8_Task_1.8_Concepts_of_Physical_Science_Item_6	.70
Science_Grade_8_Task_2.8_Concepts_of_Life_Science_Item_1	.76
Science_Grade_8_Task_2.8_Concepts_of_Life_Science_Item_2	.52
Science_Grade_8_Task_2.8_Concepts_of_Life_Science_Item_3	.57
Science_Grade_8_Task_2.8_Concepts_of_Life_Science_Item_4	.56
Science_Grade_8_Task_2.8_Concepts_of_Life_Science_Item_5	.77
Science_Grade_8_Task_2.8_Concepts_of_Life_Science_Item_6	.68
Science_Grade_8_Task_3.8_Concepts_of_Earth_Science_Item_1	.73
Science_Grade_8_Task_3.8_Concepts_of_Earth_Science_Item_2	.74
Science_Grade_8_Task_3.8_Concepts_of_Earth_Science_Item_3	.70
Science_Grade_8_Task_3.8_Concepts_of_Earth_Science_Item_4	.55
Science_Grade_8_Task_3.8_Concepts_of_Earth_Science_Item_5	.45
Science_Grade_8_Task_3.8_Concepts_of_Earth_Science_Item_6	.88
Science_Grade_8_Task_4.8_Science_and_Technology_Item_1	.91
Science_Grade_8_Task_4.8_Science_and_Technology_Item_2	.47
Science_Grade_8_Task_4.8_Science_and_Technology_Item_3	.86
Science_Grade_8_Task_4.8_Science_and_Technology_Item_4	.81
Science_Grade_8_Task_4.8_Science_and_Technology_Item_5	.75
Science_Grade_8_Task_4.8_Science_and_Technology_Item_6	.84

Science Items Grade 10

The most difficult item in Grade 10 is 2.10, Item 2, with a success rate of approximately 32%. The easiest item in Grade 10 is 3.10, Item 1, with a success rate of approximately 88%.

Item Description	*p*
Science_Grade_10_Task_1.10_Concepts_of_Physical_Science_Item_1	.68
Science_Grade_10_Task_1.10_Concepts_of_Physical_Science_Item_2	.63
Science_Grade_10_Task_1.10_Concepts_of_Physical_Science_Item_3	.77
Science_Grade_10_Task_1.10_Concepts_of_Physical_Science_Item_4	.62
Science_Grade_10_Task_1.10_Concepts_of_Physical_Science_Item_5	.71
Science_Grade_10_Task_1.10_Concepts_of_Physical_Science_Item_6	.50
Science_Grade_10_Task_2.10_Concepts_of_Life_Science_Item_1	.66
Science_Grade_10_Task_2.10_Concepts_of_Life_Science_Item_2	.32
Science_Grade_10_Task_2.10_Concepts_of_Life_Science_Item_3	.79
Science_Grade_10_Task_2.10_Concepts_of_Life_Science_Item_4	.70
Science_Grade_10_Task_2.10_Concepts_of_Life_Science_Item_5	.78
Science_Grade_10_Task_2.10_Concepts_of_Life_Science_Item_6	.53
Science_Grade_10_Task_3.10_Concepts_of_Earth_Science_Item_1	.88
Science_Grade_10_Task_3.10_Concepts_of_Earth_Science_Item_2	.58
Science_Grade_10_Task_3.10_Concepts_of_Earth_Science_Item_3	.55
Science_Grade_10_Task_3.10_Concepts_of_Earth_Science_Item_4	.76
Science_Grade_10_Task_3.10_Concepts_of_Earth_Science_Item_5	.48
Science_Grade_10_Task_3.10_Concepts_of_Earth_Science_Item_6	.71
Science_Grade_10_Task_4.10_Science_and_Technology_Item_1	.58
Science_Grade_10_Task_4.10_Science_and_Technology_Item_2	.78
Science_Grade_10_Task_4.10_Science_and_Technology_Item_3	.56
Science_Grade_10_Task_4.10_Science_and_Technology_Item_4	.71
Science_Grade_10_Task_4.10_Science_and_Technology_Item_5	.84
Science_Grade_10_Task_4.10_Science_and_Technology_Item_6	.82

ELOS Task Level of Support Analysis

Each task in reading, writing, and mathematics was analyzed across the 3-4, 5-6, 7-8, and 9-10 grade bands to determine the level of support required to achieve success, on average. Level 1 is full physical support; level 2 is partial physical contact support; level 3 is visual, verbal and/or gestural support; level 4 is complete independence. Science was analyzed in the same manner for grades 4, 8, and 10. The pattern is that most students who are participating on the ELOS assessments are functioning in two separate groups, those needing full physical support (Level 1) and those not needing any support (Level 4) to complete the assigned tasks. Fewer students across the gamut of results required a Level 2 support system (partial physical support) or a Level 3 support system (visual/ verbal/

gestural support). These results are consistent with last year's results. Please note that the results provided are rounded and thus each task may not add up to exactly 100%.

ELOS Reading

Grade band	Level of Support (1-4)	% of students at this level
3-4	1	40
	2	9
	3	16
	4	34
5-6	1	38
	2	12
	3	15
	4	35
7-8	1	41
	2	11
	3	20
	4	28
9-10	1	28
	2	12
	3	13
	4	46

ELOS Writing

Grade band	Level of Support (1-4)	% of students at this level
3-4	1	46
	2	9
	3	14
	4	31
5-6	1	35
	2	9
	3	15
	4	41
7-8	1	45
	2	10
	3	14
	4	31
9-10	1	37
	2	11
	3	13
	4	40

ELOS Mathematics

Grade band	Level of Support (1-4)	% of students at this level
3-4	1	56
	2	7
	3	13
	4	24
5-6	1	31
	2	10
	3	19
	4	40
7-8	1	39
	2	12
	3	14
	4	34
9-10	1	37
	2	11
	3	12
	4	39

ELOS Science

Grade	Level of Support (1-4)	% of students at this level
4	1	43
	2	11
	3	20
	4	26
8	1	38
	2	10
	3	18
	4	33
10	1	44
	2	12
	3	11
	4	33

CHAPTER 9: ADEQUATE YEARLY PROGRESS

Quality assurance is applied to all Adequate Yearly Progress (AYP) calculations. The original data file is first reviewed by EED for demographic accuracy, most specifically, the Alaska Student Identification numbers (AKSID) and the grade level assignments for each student. This review of submissions for accuracy ensures that only appropriate records used for calculations and that the calculations are performed at the correct grade level. All subsequent AYP calculations are performed by two separate procedures using two separate statisticians. While each statistician performs internal quality checks to ensure the accuracy of their work independently, they also compare files to ensure a 100% match between their results for all records. Historically, agreement has been established for all results beyond the thousandths level. Once a 100% match between the two statisticians is verified, additional, randomized quality assurance checks are performed on the final AYP data file as well as the *Individual Student Reports* (ISRs) generated from the final AYP data file by three additional quality assurance evaluations.

Standard

The first quality assurance evaluation reviewed 21 total student records. The sample represented a variety of districts and regions, but more importantly looked at all possible permutations the syntax used for calculations (this would require only 15 reviews, however, three student records pulled were ELOS records and three additional files were reviewed for redundancy). Student records were pulled from the AYP file and compared to the original data file.

1) Verified student demographics, including student first name, student middle name, student last name, student Alaska student identification number, student grade, student date of birth, student district, student school, and relevant Assessor name.
2) Verified all cut scores across reading, writing, math, and science (and the combined ELA cut scores).
3) Verified raw scores across reading, writing, math, and science (one content area, per grade band, per student).
4) Verified all scaled scores in reading, writing, math, and science (and the combined ELA scaled scores), using the established linear equating formula. This verification included an analysis of current strands and weights, as well as current and former standard deviations and means.
5) Verified all AYP performance level assignments.

Individual Student Reports

The second quality assurance evaluation reviewed 22 ISRs, selected to represent all possible permutations of the ISR forms, to ensure that there was 100% match between the final AYP file and what is reported on the ISRs using the same five domains reviewed above. ISRs were reviewed for overall formatting and accuracy, including all data, cut scores, and performance level assignments. In addition, all Performance Level Descriptors (PLDs) were verified. A review was conducted to ensure that all students who participated in the AKAA received ISRs. All students were included.

Confirmatory Quality Assurance Review

A second quality assurance evaluator performed the following verifications in order to address potential accuracy concerns. Some of these reviews are purposefully redundant. The third quality assurance evaluation:

1) Verified that the reasons not administered are coded appropriately in the final AYP data file.
2) Verified that subject area calculations sum correctly and are appropriately matched with the cut score.
3) Verified all nulls and zeroes.
4) Verified that ISRs contain appropriate data transfer, spelling, headers and footers, layout by grade, and performance level assignment.

Adequate Yearly Progress Report Overview

Adequate Yearly Progress (AYP) results are displayed with each attained score value presented in two different ways for depicting proficiency:

1. Four categories with 1 = Far Below, 2 = Below, 3 = Proficient, and 4 = Advanced
2. Two categories with 0 = Below (with Far Below and Below collapsed) and 1 = Above (with Proficient and Advanced collapsed)

For each table, the data present: (a) the frequency of the score value (Frequency), reflecting the number of students at that score value, (b) the percentage of students (Percent), reflecting the number of students in the grade band with a score value divided by all students taking the alternate assessment, including those with missing score values or in a different grade, (c) the percentage of students (Valid Percent), reflecting the number of students who actually had values divided by only those students with a score value in that grade band, and (d) the percentage of students with score values (Cumulative Percent), reflecting a running accumulation of percentages at/below that specific score value using only students in the grade band. The 'Frequency' and 'Valid Percent' need to be the focus of interpretations.

Reading Adequate Yearly Progress

Reading Grades 3 and 4

In grades 3 and 4, 38.7% of students were proficient (a score of 3), and 20.8% of students achieved a score of 4 (advanced) equaling a total of 59.5% of all students achieving proficiency. The total percentage of students receiving scores of 2 (below proficient) or 1 (far below proficient) was 40.5%.

Reading Grades 5 and 6

In grades 5 and 6, 46% of students received a score of 3 (proficient), and 0% of students received a score of 4 (advanced) equaling a total of 46% of all students achieving proficiency. The total percentage of students receiving scores of 2 (below proficient) or 1 (far below proficient) was 54%.

Reading Grades 7 and 8
In grades 7 and 8, 48.5% of students received a score of 3 (proficient), and .5% of students received a score of 4 (advanced) equaling a total of 49% of all students achieving proficiency. The total percentage of students receiving scores of 2 (below proficient) or 1 (far below proficient) was 51%.

Reading Grades 9 and 10
In grades 9 and 10, 35.6% of students received a score of 3 (proficient), and 20.9% of students received a score of 4 (advanced) equaling a total of 56.5% of all students achieving proficiency. The total percentage of students receiving scores of 2 (below proficient) or 1 (far below proficient) was 43.5%.

Appendix 7.1 Reading Statistics

Writing Adequate Yearly Progress

Writing Grades 3 and 4
In grades 3 and 4, 30.4% of students received a score of 3 (proficient), and 36.3% of students received a score of 4 (advanced) equaling a total of 66.7% of all students achieving proficiency. The total percentage of students receiving scores of 2 (below proficient) or 1 (far below proficient) was 33.5%.

Writing Grades 5 and 6
In grades 5 and 6, 33.8% of students received a score of 3 (proficient), and 21.9% of students received a score of 4 (advanced) equaling a total of 55.7% of all students achieving proficiency. The total percentage of students receiving scores of 2 (below proficient) or 1 (far below proficient) was 44.4%.

Writing Grades 7 and 8
In grades 7 and 8, 47.2% of students received a score of 3 (proficient), and 8.2% of students received a score of 4 (advanced) equaling a total of 55.4% of all students achieving proficiency. The total percentage of students receiving scores of 2 (below proficient) or 1 (far below proficient) was 44.6%.

Writing Grades 9 and 10
In grades 9 and 10, 52% of students received a score of 3 (proficient), and 2.3% of students received a score of 4 (advanced) equaling a total of 54.3% of all students achieving proficiency. The total percentage of students receiving scores of 2 (below proficient) or 1 (far below proficient) was 45.8%.

Appendix 7.2 Writing Statistics

Math Adequate Yearly Progress

Math Grades 3 and 4
In grades 3 and 4, 27.8% of students received a score of 3 (proficient), and 41.4% of students received a score of 4 (advanced) equaling a total of 69.2% of all students achieving proficiency. The total percentage of students receiving scores of 2 (below proficient) or 1 (far below proficient) was 30.8%.

Math Grades 5 and 6
In grades 5 and 6, 35.2% of students received a score of 3 (proficient), and 42.8% of students received a score of 4 (advanced) equaling a total of 78% of all students achieving proficiency. The total percentage of students receiving scores of 2 (below proficient) or 1 (far below proficient) was 22%.

Math Grades 7 and 8
In grades 7 and 8, 32.3% of students received a score of 3 (proficient), and 21% of students received a score of 4 (advanced) equaling a total of 53.3% of all students achieving proficiency. The total percentage of students receiving scores of 2 (below proficient) or 1 (far below proficient) was 46.6%.

Math Grades 9 and 10
In grades 9 and 10, 23.2% of students received a score of 3 (proficient), and 24.9% of students received a score of 4 (advanced) equaling a total of 48.1% of all students achieving proficiency. The total percentage of students receiving scores of 2 (below proficient) or 1 (far below proficient) was 52%.

Appendix 7.3 Mathematics Statistics

Science Adequate Yearly Progress

Science Grade 4
In grade 4, approximately 57.7% of students received a score of 3 (proficient), and 9.9% of students received a score of 4 (advanced) equaling a total of 67.6% of all students achieving proficiency. The total percentage of students receiving scores of 2 (below proficient) or 1 (far below proficient) was 32.4%.

Science Grade 8
In grade 8, approximately 44.2% of students received a score of 3 (proficient), and 19.8% of students received a score of 4 (advanced) equaling a total of 64% of all students achieving proficiency. The total percentage of students receiving scores of 2 (below proficient) or 1 (far below proficient) was 36%.

Science Grade 10

In grade 10, approximately 57.5% of students received a score of 3 (proficient), and 14.9% of students received a score of 4 (advanced) equaling a total of 72.4% of all students achieving proficiency. The total percentage of students receiving scores of 2 (below proficient) or 1 (far below proficient) was 27.5%.

Appendix 7.4 Science Statistics

CHAPTER 10: PROGRAM IMPROVEMENT

Program Evaluation

The AKAA undergoes ongoing and multiple-level evaluation of effectiveness and reliability. In addition to a *Survey of Consequential Validity*, DRA and EED analyze the use of the technical components of the training and score reporting system, verify the effectiveness of training on scoring consistency, analyze the use and appropriateness of accommodations employed in administering the assessments, and review help desk calls for areas requiring additional training.

Summary of Consequential Survey

Assessors are asked annually to complete a survey regarding the Alternate Assessment, their instruction and curriculum, and information about themselves.

Training and Qualifications

The educators who work with Alaska's most significantly impaired students are experienced and well trained. Almost half of Assessors have earned a Master's degree or higher (48%), and 90% have earned a Special Education certificate, with 65% holding a General Education certificate. One half of the Assessors have been teaching students with significant disabilities for six or more years, and 23% have worked with this population for more than sixteen years.

Accessibility and Impact

Fifty-eight percent of the participants agreed or strongly agreed with the statement, "The Alternate Assessment is accessible to my students" while 71% agreed or strongly agreed that their students "are improving their academic skills."

Appendix 10.1a Consequential Validity Survey Questions

Appendix 10.1b Consequential Validity Survey Summary Answers

Appendix 10.1c Consequential Validity Survey Written Responses

Recommendations for Future Consideration

Technological Improvements

Representatives from Dillard Research Associates met with key personnel in Alaska's Assessment division to plan for the 2013-2014 testing year. The document detailing technology changes are included in Appendix 10.2.

Appendix 10.2 2013-2014 Technology Changes

Recommendations for Training

During the 2012-2013 school year, Assessors participated in one or more training venues:

Face-to-face training led by DRA and EED:

- New Mentor Training
- All Mentor Training

Face-to-face training led by QTs: In-district trainings led by QTs

In addition, all Assessors participated in self-paced, individual training through the ak.k12test.com website, participated in online proficiency testing, entered data into the Data Entry site (including information on accommodations used), and accessed the Help Desk for a variety of issues.

Finally, Qualified Trainers were invited to participate in three webinars to review and highlight key points regarding the online training site, testing window, and Reading Observation and Writing Scoring Analysis. The webinars were held on November 6, 2012 (prior to Annual Mentor Training), January 23, 2013 (prior to the Testing Window opening on January 28, 2013), and on April 6, 2013 (at the close of the testing window).

Each of these venues produced data that are useful to record and analyze to determine possible impacts on training in the 2012-2013 school year.

Training Recommendations from EED-led trainings

Twenty AITs participated in the October 2013 New Mentor Training and 18 successfully completed the program. The *New Mentor Scoring Accuracy Report* (Appendix 4.2) provides the following recommendations:

" The training regimen for new mentors is substantive and time consuming. While the training must remain robust, it is possible to make some procedures more efficient. In that vein, shortening the practice tests is recommended. This can be accomplished by including only one example of each type of item in each subject area and a range of item types across all grade bands. Each practice test scoring protocol should also include the General Instructions page describing examples of test accommodations and modifications. Concurrently, a new sample protégé packet should be created using these targeted practice tests.

Each participant should both administer the full set of targeted practice tests and pose as a student for another AIT for a full set of targeted practice tests. Written and verbal training instructions in New Mentor Training should more clearly highlight the importance of administering practice tests for participants in New Mentor Training and the importance of practice tests and reviews of protégé test administration when these New Mentors train future AITs.

New training modules for New Mentor training should include additional examples of ELOS items, with review of administration, scoring, and recording expectations to address the lower accuracy scores with regard to ELOS practice tests. Science and writing training materials should be reviewed for possible areas of improvement, related to the lower accuracy scores in the domains of protégé review." (p. 3).

Training Recommendations from Accommodations Used

The accommodation "hand over hand assistance" continues to be recorded by Alaska Alternate Assessment QAs and QTs. Under some circumstances, this accommodation may serve as a modification. A modification is an adaptation that alters the construct being tested and invalidates the question where the modification was employed.

In all but one instance in the 2013 testing year, "hand over hand assistance" was recorded as an accommodation used with a student who participated in the ELOS administration, an appropriate level of support. In the one instance where this accommodation was listed for a student who did not participate in the ELOS administration, the student participated in ELOS for Reading, Writing, and Mathematics assessments, but not for Science. Further analysis shows that the Assessor probably performed a "copy & paste" function of the list of accommodations for all four assessments for this student. This may mean that "hand over hand assistance" was not employed in the Science assessment for this student as he completed the Standard administration of the Science assessment.

Recommendations*:*

Continue to reinforce on the AKAA training site and during Annual Mentor training the differences between modifications and accommodations. Enhance the ak.k12test.com training site to more fully examine this issue. Follow up with the Assessor in question.

Training Recommendations from the Reading Score-behind Observations

Statewide reading score-behind observations were conducted on March 25-29, 2013. The results from the Reading Score-behind observation project demonstrate high levels of accuracy in all subdomains

Assessors were accurate in reading the scoring rules and expectations. Assessors and Expert Raters had very high levels of agreement in rating student performance. Overall correlations ranged from 0.88 to 1.00, with all items except for one rated with correlations that ranged from 0.96 to 1.00.

The overall administration results are also positive. The average ratings on the three-point (0-1-2) scale ranged from 1.86 to 2.00. The only areas of concern were the small number of Assessors who did not record a mark for correct answers for every item and a small number of Assessors who did not record incorrect answers in the scoring protocol verbatim.

In the area of data entry, Assessors performed without error. All Assessors observed completed the data entry process correctly in all reviewed aspects.

Assessors' responses to the interview questions presented demonstrated a general approval of the AKAA Reading test design, with some challenges noted in time management and organization of materials. Assessors emphasized the need to prepare in advance of testing in order to be successful. A small number of Assessors had never seen an Individual Student Report (ISR). Finally, a number of Assessors were unaware of the fact that they could use the Practice Tests to prepare themselves and their students for the AKAA Reading assessments.

The following recommendations were provided to support continuous improvement efforts:

- Font substitutions - Assessors should be trained to substitute a different but equivalent representation of the materials (e.g., a picture-symbol or a representation of a letter that students are used to seeing during instruction).
- Deviations from script - EED may want to reconsider the need for exact verbatim presentation of directions or provide supplemental guidance and training.
- Preparation/Item Sequencing – Training should re-iterate the need to prepare for AKAA administration (e.g., printing and preparing all materials, reading through and practicing administration of scoring protocols).
- ELOS – Assessors need to be provided with examples of when it is/is not appropriate to go to ELOS during upcoming trainings.
- Examples – As the AKAA develops over the coming years, it is important to provide examples for some tasks that require administration support. Many students said letter names instead of letter sounds, for example, as that task had no example provided by the Assessor or the scoring protocol.
- Two answers – Assessors must be provided guidance regarding when it is appropriate to re-prompt in these situations.
- Printing – Assessors can: 1) read the scoring protocol in advance to reduce the need to flip back and forth, and 2) print the directions on 1-sided paper, or have an additional copy handy.
- Practice Tests – Further training should provide more guidance on the appropriate uses of the practice tests.
- Scoring Protocol Documentation – Assessors need to be reminded of the importance in documenting correct answers with an appropriate mark and recording incorrect responses verbatim.
- Individual Student Reports – All Qualified Trainers have access to official ISRs from the AKReports website, as do all DTCs; they should work with their respective QTs and/or DTCs to get copies of these reports.

Training Recommendations from the Writing Scoring Accuracy Project

Based on the results of this year's analyses, the writing scoring rules require no modifications. However, based upon the document review summary below, the field could benefit from additional guidance and training in specific areas of scoring writing.
There were several patterns noted by DRA's expert reviewer during the score-behind process. The expert reviewer looked at the documentation present in all submitted scoring protocols and student materials to review accuracy of representation as well as self-consistency. Several areas of improvement were established during this review, as patterns emerged from the concerns noted. The following topics should be discussed during the next writing training for QAs and QTs:

- One student wrote a first name twice; the Assessor scored the first name twice instead of scoring the actual last name as 0 points out of however many points were possible. It is recommended that this be discussed during training.
- Some Assessors continue to give credit for capital letters within sentences (F, N, P, L, etc.), even though credit should not be awarded unless the student uses all capitals. This needs to be re-emphasized in training.
- Some Assessors are still confused about scoring letter sequences and not the accuracy of each individual letter. For example, if the word were "This" and the student spells "^T-n-i^s^" it cannot be a 4/5, but a 3/5.
- One student insisted on using vertical lines to separate each word; the Assessor treated them as spaces and scored them as if they were simply demarcating appropriate spacing. This is an acceptable approach, but needs to be addressed in training.
- Assessors appear to be generally less rigorous (too lenient) when grading the students when they are spelling their own names, possibly due to the teacher's familiarity with the student's name. The same CLS rules apply in the name-spelling tasks, however.
- One Assessor used the CLS scoring rules to score a CWS task. This errant application of a writing scoring rule resulted in significant disparities between the Assessor and the expert.

Training Recommendations from Proficiency Testing

The greatest number of Assessors who required three or more attempts to pass a proficiency test occurred in the subject areas of math and writing.

> **Recommendation:** Analyze the test items that were most frequently failed for content. Enhance face-to-face and online training around those content issues. Appendix 4.1 will serve as the basis of that analysis.

Training Recommendations from HelpDesk Questions

During the 2013 testing window, DRA's HelpDesk operator (Sevrina Tindal) answered 104 inquiries from Alaska Assessors of the Alternate Assessment. Their queries represented thirteen topics and are summarized in Appendix 10.2. These questions should be reviewed for possible clarification on the ak.k12test.com training site.

Appendix 10.3 HelpDesk Summary

Most of the HelpDesk calls related to operational or procedural questions, and were answered quickly. Follow up assistance was provided as necessary.

Background

During the 2013 testing window, DRA's HelpDesk operator (Sevrina Tindal) answered 104 inquiries from Qualified Assessors of the Alaska Alternate Assessment (AKAA). Their queries represented 26 topics.

Most of the HelpDesk calls related to operational or procedural questions, and were answered quickly. Follow up assistance was provided as necessary. The complete report ("AKAA_2012_2013_HelpdeskLog.xlsx") is located on the Secure Transfer Server.

HelpDesk Query Summary Table

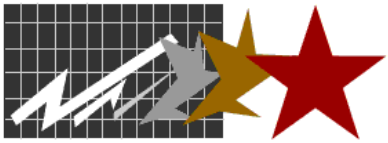
Number	Question/Challenge
13	QA, QT retired, left, etc.
9	Refresher training and testing
8	Reasons Not Tested
8	User status upgrades/print certificates
7	Can't locate the *Student Communications Survey*
7	User system issues (download, video size, browser)
6	Login questions
6	Protégé reset and monitoring
5	Who enters student info?
5	Location of training PowerPoints
4	SCS Survey only accessible once
3	ELOS
3	Access secure tests
3	Validity survey
3	Monitoring: How to check if all tests submitted?
2	Accommodations
2	Writing scoring
2	Writing Scoring Accuracy Project
1	* Terra Nova Test VS AKAA
1	Refresher vs full training
1	Scoring when sounds read right to left
1	TSA: Can I send in copies?
1	Can a para-educator administer the AKAA?
1	Shredding test materials
1	Practice tests confusion from directions
1	GoToMeeting issue (logged in too early)
104	**TOTAL**

Recommendations for Training

The category with the greatest number of queries related to districts requesting DRA assistance in removing Qualified Assessors or Qualified Trainers who had moved from the district or retired. This issue does not require training; this is the recommended solution.

The remaining issues, with the exception of the query related to the Terra Nova Test and AKAA rules around eligibility (marked with an *), are covered in training.

The question about the Terra Nova was a request for assistance in locating the information regarding the rules that a child would not take the Terra Nova test if the IEP team determined that the most appropriate assessment for that student is the AKAA. This information is on the online training site, but is not easily located. DRA and EED have determined to correct this in 2013-2014.



Dillard Research Associates

Alaska Alternate Assessment

2013 - 2014

Technical Report

Dillard Research Associates
June 30, 2013

Alaska Alternate Assessment Technical Report

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APPENDICES