

Oregon Department of Education 2007–2008

Technical Report

Oregon's Statewide Assessment System Alternate Assessment, 2007–08

Assessment Scoring Protocols

Last updated on October 27, 2010



Oregon's Statewide Assessment System Technical Report: Volume 7, Alternate Assessment, 2007–08 Technical Adequacy Last updated on October 27, 2010

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Chapter 1. Participation in Alternate Assessment

The IEP team determines a student's eligibility for an alternate assessment based on state-provided guidance (Figures 2.1 through 2.3). Guidance from the state urges teams to consider student characteristics, type and level of instruction, and curriculum variables to assist in the decision-making process.

1.1 Participation Guidelines for the General Assessment

IEP teams are instructed to thoroughly consider whether or not a student is able to participate in the state's general assessment (Oregon's State Assessment System: OSAS) (with the provision of any necessary accommodations) prior to recommending participation in the alternate assessment. When providing accommodations to students, IEP teams are instructed to consider only those accommodations that do not impact the validity of the assessment. In Oregon this refers to the selection of state approved Accommodations which are considered distinct from modifications which may alter the construct under assessment if implemented on a student by student level.

Decision-Making

In general, students who (1) perform at or around grade level, (2) have academic difficulties that primarily surround reading, (3) are reading within two to three grades of their enrolled level, and (4) have other difficulties that are mild to moderate and can typically be addressed by using simplified language should be recommended for the general assessment.

Figure 1.1. Guidelines for General Assessment as Posted

Consider General Assessment with or without accommodations if:

Student:

- Performs at or around grade level
- Has academic difficulties that primarily surround reading but may be average or close to average in other subject areas
- Is reading within two to three grades of his or her enrolled level
- Has academic difficulties in areas other than reading that are "mild to moderate" and can typically be addressed by using simplified language

Instruction:

• Is primarily general curriculum instruction (but may also use a specialized curriculum in some areas)

Some Judgment variables:

- What assessment did he take last year?
- How is his attention?
- What types of behaviors should be considered?

1.2 Participation in the Standard Administration of the Extended Assessment

Students taking the Extended Assessment are not required to belong to any specific disability category to be considered eligible for the assessment. Decisions regarding participation in an alternate assessment are based on state-defined guidelines for the parameters of a significant cognitive disability.

Decision-Making

In general, students who (1) perform well below grade level; (2) are significantly below grade level in reading; (3) have academic difficulties that are generalized (to all subject areas) and are significant; and (4) who benefit from specialized individual supports may be considered for the alternate assessment.

Figure 1.2. Guidelines for Standard Administration as Posted

Consider Standard Administration of the Extended Assessment if:
Student:
Performs well below grade level
 Is significantly below grade level in reading
Has academic difficulties that are generalized (to all subject areas) and are significant
Benefits from specialized individual supports
Instruction:
 Is primarily from a specialized curriculum and/or
• From general curriculum must be significantly reduced in breadth, depth, and complexity
Some Judgment variables:
What assessment did he take last year?
How is his attention?
 What types of behaviors should be considered?
Previous relevant experiences

1.3 Participation in the Scaffold Administration of the Extended Assessment

The Scaffold Administration of the Extended Assessment is considered an equivalent participation option to the Standard Administration option. The Scaffold Administration allows students additional supports to access the content presented by the tasks. The decision to administer a Scaffold Administration of the assessment is made by the IEP team.

Decision-Making

Students (1) whose needs are significantly impacted by a disability; (2) do not read; (3) have academic, mobility, and receptive and expressive language difficulties that are generalized and significant; and (4) who rely on individual and significant supports to access reduced content materials should be considered for the additional supports offered by the Scaffold administration option of the alternate assessment.

Figure 1.3. Guidelines for Scaffolded Administration as Posted



1.4 Participation by Grade and Subject

Participation in each of the assessments is aligned with the general assessment (OAKS) system requirements for the state of Oregon. The Extended Reading and Extended Mathematics Assessments are taken in grades 3, 4, 5, 6, 7, 8, and 10. The Extended Science Assessment is taken in grades 5, 8, and 10. The Extended Writing Assessment is taken in grades 4, 7, and 10.

The data presented in this chapter represents all records for any students who took a 2007-08 Extended Assessment. These numbers do not reflect the final record count submitted for AYP accountability purposes. Data submitted for final accountability purposes removes any students who took both a General Assessment and an alternate assessment from the Extended Assessment report.

Table 2.1 shows the numbers and percentages of students participating in Oregon's Extended Assessments by subject and grade-band (Elementary, Middle, and High). Greater numbers of students participated in Extended Reading and Extended Mathematics (XMA) than in Extended Writing (XWA) and Extended Science (XSA). Writing and Science had more secondary- than primary-aged participants.

Table 1.1. Total Participation by subject*

Subject		Elementary		Middle		High	
	Total number of students participating per subject area	Total number of elementary participants per subject	Percentage of elementary participants by subject	Total number of middle participants per subject	Percentage of middle participants by subject	Total number of high participants per subject	Percentage of high participants by subject
Reading	5346	3088	58%**	1771	33%	487	9%
Mathematics	4679	2485	53%	1702	36%	492	11%
Writing	2090	1015	49%	589	28%	486	23%
Science	1620	623	39%	524	32%	473	29%

* The data presented in this chapter represents all records for any students who took a 2007-08 Extended Assessment. These numbers do not reflect the final record count submitted for AYP accountability purposes. Data submitted for final accountability purposes removes any students who took both a General Assessment and an alternate assessment from the Extended Assessment report.

** Read: 58% of students taking an Extended Reading Assessment were elementary students.

1.5 Participation by Disability

Students with mental retardation (19.5%-33.2%) and those with specific learning disabilities (13.4% - 30.7%) had the highest rates of participation across the four subject areas in Elementary Assessments followed by students with Autism Spectrum Disorder (ASD) (15.4% - 21%) and students with communication disorders (11.1% - 14.4%).

Students with mental retardation had the highest rate of participation in Middle and High Assessments (40.3% - 50.2%) followed by students with Autism Spectrum Disorder (16.6% - 22.7%), specific learning disabilities (9.1% - 17.9%), and students with other health impairments (9.4% - 11.5%).

Participation across all disability categories for each of the four subject areas is shown in Tables 2.2 through 2.5. Percentages of students with visual impairments, hearing impairments, deaf blindness and traumatic brain injuries were consistently low across subject areas in all grade levels ranging in percentage from 0.0% - 2.1%. These figures are consistent with expectations related to the guidelines provided to IEP teams for participation in the Extended Assessments.

SECC Category	Elementary		Middle		High	
	Ν	%	N	%	N	%
Specific Learning Disability	863	30.7%	294	17.9%	53	12.2%*
Mental Retardation	548	19.5%	663	40.3%	186	42.9%
Autism Spectrum Disorder	433	15.4%	274	16.6%	97	22.4%
Communication Disorder	395	14.1%	99	6.0%	13	3.0%
Other Health Impairment	315	11.2%	155	9.4%	44	10.1%
Orthopedic Impairment	99	3.5%	62	3.8%	17	3.9%
Emotional Disturbance	78	2.8%	37	2.2%	11	2.5%
Hearing Impairment	40	1.4%	26	1.6%	6	1.4%
Visual Impairment	21	0.7%	19	1.2%	2	0.5%
Traumatic Brain Injury	17	0.6%	17	1.0%	5	1.2%
Deaf Blindness	2	0.1%	1	0.1%	0	0.0%

Table 1.2. Reading: Participation by Disability

* Read: 30.7% of the students taking Extended Elementary Reading were students with a specific learning disability.

SECC Category	Elementary		Middle		High	
	Ν	%	Ν	%	Ν	%
Mental Retardation	547	24.3%	665	42.0%	188	43.0%
Specific Learning Disability	434	19.3%	212	13.4%	47	10.8%
Autism Spectrum Disorder	425	18.9%	284	18.0%	99	22.7%
Communication Disorder	324	14.4%	98	6.2%	12	2.7%
Other Health Impairment	289	12.8%	164	10.4%	49	11.2%
Orthopedic Impairment	99	4.4%	61	3.9%	16	3.7%
Emotional Disturbance	63	2.8%	39	2.5%	12	2.7%
Hearing Impairment	36	1.6%	22	1.4%	7	1.6%
Visual Impairment	19	0.8%	19	1.2%	2	0.5%
Traumatic Brain Injury	15	0.7%	17	1.1%	5	1.1%
Deaf Blindness	2	0.1%	1	0.1%	0	0.0%

 Table 1.3. Mathematics: Participation by Disability

Table 1.4. Writing: Participation by Disability

SECC Category	Elementary		Middle		High	
	Ν	%	Ν	%	Ν	%
Specific Learning Disability	241	25.8%	78	14.1%	53	11.7%
Mental Retardation	199	21.3%	234	42.2%	192	42.5%
Autism Spectrum Disorder	159	17.0%	97	17.5%	99	21.9%
Communication Disorder	122	13.1%	30	5.4%	13	2.9%
Other Health Impairment	111	11.9%	54	9.7%	52	11.5%
Orthopedic Impairment	39	4.2%	35	6.3%	17	3.8%
Emotional Disturbance	32	3.4%	9	1.6%	11	2.4%
Hearing Impairment	14	1.5%	5	0.9%	6	1.3%
Visual Impairment	9	1.0%	11	2.0%	4	0.9%
Traumatic Brain Injury	6	0.6%	2	0.4%	5	1.1%
Deaf Blindness	1	0.1%	0	0.0%	0	0.0%

SECC Category	Elementary		Middle		High	
	Ν	%	Ν	%	Ν	%
Mental Retardation	188	33.2%	247	50.2%	184	43.6%
Specific Learning Disability	76	13.4%	45	9.1%	45	10.7%
Autism Spectrum Disorder	119	21.0%	85	17.3%	96	22.7%
Communication Disorder	63	11.1%	16	3.3%	11	2.6%
Other Health Impairment	58	10.2%	48	9.8%	46	10.9%
Orthopedic Impairment	24	4.2%	16	3.3%	17	4.0%
Emotional Disturbance	14	2.5%	7	1.4%	12	2.8%
Hearing Impairment	12	2.1%	9	1.8%	5	1.2%
Visual Impairment	5	0.9%	11	2.2%	2	0.5%
Traumatic Brain Injury	6	1.1%	7	1.4%	4	0.9%
Deaf Blindness	1	0.2%	1	0.2%	0	0.0%

Table 1.5. Science: Participation by Disability

1.6 Participation by Ethnicity

In 2007-2008, all ethnicities were represented in participation in the Extended Assessments. Consistent with geographic expectations, students who are White constitute the largest population (58 - 73%) across subject areas and grade bands followed by students who are Hispanic/Latino (13 – 26%), and students who are African American (4 – 5%). Tables 2.6 through 2.9 show the participation of students by ethnicity in each of the four subject areas. Tables 2.1 through 2.14 show participation comparisons by ethnicity between the general education population and the Extended Assessments population by grade band (i.e., Elementary, Middle or High).

Ethnicity	Elementary Middle		High			
	Ν	%	Ν	%	Ν	%
White	1804	58%*	1128	63%	356	73%
Hispanic	793	26%	368	21%	65	13%
African American	156	5%	87	5%	21	4%
Asian/Pacific Islander	98	3%	58	3%	9	2%
American Indian/Alaskan	76	2%	44	3%	20	4%
Declined to Report	68	2%	42	2%	7	2%
Multi-Ethnic	93	3%	44	3%	9	2%

Table 1.6. Reading: Participation by Ethnicity

*Read: 58% of the students taking Elementary Extended Reading were White.

Ethnicity	Elementary		Middle		High	
	Ν	%	Ν	⁰∕₀	Ν	%
White	1479	60%	1109	65%	356	73%
Hispanic	592	24%	321	18%	67	14%
African American	134	5%	91	5%	21	4%
Asian/Pacific Islander	89	4%	54	3%	11	2%
American Indian/Alaskan	59	2%	42	3%	19	4%
Declined to Report	56	2%	42	3%	7	1%
Multi-Ethnic	76	3%	43	3%	11	2%

 Table 1.7. Mathematics: Participation by Ethnicity

Table 1.8. Writing: Participation by Ethnicity

Ethnicity	Elementary		Middle		High	
	Ν	%	Ν	%	Ν	%
White	601	59%	374	64%	355	73%
Hispanic	267	26%	118	20%	64	13%
African American	42	4%	31	5%	21	4%
Asian/Pacific Islander	36	4%	19	3%	10	2%
American Indian/Alaskan	22	2%	17	3%	19	4%
Declined to Report	18	2%	15	3%	6	2%
Multi-Ethnic	31	3%	14	2%	10	2%

Ethnicity	Elementary		Mic	ldle	High	
	Ν	%	Ν	%	Ν	%
White	380	61%	366	70%	346	73%
Hispanic	145	23%	83	16%	64	14%
African American	27	4%	22	4%	20	4%
Asian/Pacific Islander	23	4%	13	3%	9	2%
American Indian/Alaskan	16	3%	12	2%	18	4%
Declined to Report	18	3%	18	3%	6	1%
Multi-Ethnic	15	2%	10	2%	9	2%

Table 1.9. Science: Participation by Ethnicity

Table 1.10. Ethnicity Representation

Ethnicity	Overall %	SECC %
American Indian/Alaskan	2.1%*	3.02%**
Asian/Pacific Islander	4.6%	2.65%
African American	3.0%	4.49%
Hispanic	16.1%	16.49%
White	70.4%	73.35
Multi-Ethnic	1.9%	***
Declined to Report	***	***

*Read: 2.1% of students in the general population are Native American/Alaskan (based on Statewide Report Card 2006-2007)

** Read: 3.02% of students in the SECC population are Native American/Alaskan (based on 2007-2008 SECC)

***These categories not reported in SECC database

Ethnicity	Elementary		Mic	ldle	High	
	Extended Assessment %	General Assessment %	Extended Assessment %	General Assessment %	Extended Assessment %	General Assessment %
American Indian/Alaskan	3%*	2%**	3%	2%	4%	2%
Asian/Pacific Islander	3%	5%	3%	5%	2%	5%
African American	5%	3%	5%	3%	4%	3%
Hispanic	26%	18%	21%	17%	13%	14%
White	58%	67%	63%	70%	73%	73%
Multi-Ethnic	3%	3%	3%	2%	2%	2%
Declined to Report	2%	2%	2%	1%	2%	1%

Table 1.11. General and Extended Assessment Ethnicity Participation Comparison (Reading)

*Read: 2% of students who took the extended assessment in Elementary Reading were Native American/Alaskan ** Read: 2% of students who took the general reading assessment in any of grades 3 – 5 were Native American/Alaskan

Table 1.12. General and Extended Assessment Ethnicity Participation Comparison (Mathematics)

Ethnicity	Elementary		Middle		High	
	Extended Assessment %	General Assessment %	Extended Assessment %	General Assessment %	Extended Assessment %	General Assessment %
American Indian/Alaskan	2%*	2%	3%	2%	4%	2%
Asian/Pacific Islander	4%	5%	3%	5%	2%	5%
African American	6%	3%	5%	3%	4%	3%
Hispanic	24%	18%	19%	17%	14%	14%
White	59%	67%	65%	70%	72%	73%
Multi-Ethnic	3%	3%	3%	2%	2%	2%
Declined to Report	2%	2%	2%	1%	2%	1%

Ethnicity	Elementary		Middle		High	
	Extended Assessment %	General Assessment %	Extended Assessment %	General Assessment %	Extended Assessment %	General Assessment %
American Indian/Alaskan	2%*	2%	2%	2%	4%	2%
Asian/Pacific Islander	4%	5%	3%	5%	2%	5%
African American	4%	3%	5%	3%	4%	3%
Hispanic	26%	18%	20%	16%	13%	14%
White	59%	67%	64%	70%	73%	73%
Multi-Ethnic	3%	3%	2%	2%	2%	2%
Declined to Report	2%	2%	3%	2%	2%	1%

Table 1.13. General and Extended Assessment Ethnicity Participation Comparison (Writing)

Table 1.14. General and Extended Assessment Ethnicity Participation Comparison (Science)

Ethnicity	Elementary		Middle		High	
	Extended Assessment %	General Assessment %	Extended Assessment %	General Assessment %	Extended Assessment %	General Assessment %
American Indian/Alaskan	3%*	2%	2%	2%	4%	2%
Asian/Pacific Islander	4%	5%	3%	5%	2%	4%
African American	4%	3%	4%	3%	4%	3%
Hispanic	23%	18%	16%	16%	14%	14%
White	61%	68%	70%	70%	73%	74%
Multi-Ethnic	2%	2%	2%	2%	2%	2%
Declined to Report	3%	2%	3%	2%	1%	1%

1.7 Participation by Gender

In the overall SECC population 33% of the students are female and 67% of the students are male.

Across all four subject areas and three grade bands (Elementary, Middle, and High) males represented nearly two-thirds of the students participating in the Extended Assessments and in each of the subject areas assessed. Participation by gender in each of the subject areas is shown in Tables 2.15 through 2.18. The percentages displayed reflect the percent of students either male or female by grade-band (Elementary, Middle, or High).

Table 1.15. Reading: Participation by Gender

Gender	Elementary		Mic	ldle	High		
	Ν	%	Ν	%	Ν	%	
Female	1003	19%*	595	11%	205	4%	
Male	2085	39%	1176	22%	282	5%	

*Read: 19% of the students taking Elementary Extended Reading are female.

Gender	Elementary		Mic	ldle	High		
	Ν	%	Ν	%	Ν	%	
Female	892	19%	618	13%	203	5%	
Male	1593	34%	1084	23%	289	6%	

Table 1.16. Mathematics: Participation by Gender

Table 1.17. Writing: Participation by Gender

Gender	Elementary		Mic	ldle	High		
	Ν	%	Ν	%	Ν	%	
Female	325	16%	204	10%	201	10%	
Male	690	33%	385	18%	285	13%	

Table 1.18. Science: Participation by Gender

Gender	Elemo	entary	Mic	ldle	High		
	Ν	%	Ν	%	Ν	%	
Female	224	14%	197	12%	194	12%	
Male	399	25%	327	20%	279	17%	

1.8 Participation by Administration Option

Except for Elementary, IEP teams selected a nearly even distribution of administration options across all four subject areas. Tables 2.19 through 2.21 show the participation of students by subject according to administration. Percentages shown reflect the percentage of students in a given administration type by grade band (Elementary, Middle or High).

Table 1.19.	Reading:	Partici	pation b	v Ad	lministrat	ion o	ption

Administration	Elem	entary	Mic	ldle	High		
	Ν	0⁄0	Ν	%	Ν	%	
Standard	2050	38%*	958	18%	213	4%	
Scaffold	1038	20%	813	15%	274	5%	

*Read: 38% of the students taking Extended Reading took the Standard Administration.

Administration	Eleme	entary	Mic	ldle	High		
	Ν	%	Ν	%	Ν	%	
Standard	1454	31%	890	19%	216	5%	
Scaffold	1031	22%	812	17%	276	6%	

 Table 1.20. Mathematics: Participation by Administration option

Table 1.21. Writing: Participation by Administration option

Administration	Elemo	entary	Mic	ldle	High		
	Ν	%	Ν	%	Ν	%	
Standard	611	29%	285	14%	211	10%	
Scaffold	404	19%	304	15%	275	13%	

Table 1.22. Science: Participation by Administration option

Administration	Elem	entary	Mie	ddle	High		
	Ν	%	Ν	%	Ν	%	
Standard	343	21%	250	15%	206	13%	
Scaffold	280	17%	274	17%	267	17%	

	MR	HI	VI	DB	CD	ED	OI	TBI	OHI	ASD	SLD
Standard	41%*	63%	21%	0%	80%	83%	24%	44%	68%	45%	88%
Scaffold	59%	38%	79%	100%	20%	17%	76%	56%	32%	55%	12%

Table 1.23. Percentage participation in Extended Reading by administration type and disability

* Read: In 2007-2008 41% of students who took an Extended Assessment with MR took the Extended Assessment with standard administration (Shading indicates areas with minimal difference between standard and scaffold; Italics indicate cell size < 10; Bold indicates larger percentage of students with the disability take the scaffold administration)

Table 1.24. Percentage participation in Extended Mathematics by administration type and disability

	MR	HI	VI	DB	CD	ED	OI	TBI	OHI	ASD	SLD
Standard	41%	55%	20%	0%	77%	79%	19%	41%	65%	45%	84%
Scaffold	59%	45%	80%	100%	23%	21%	81%	59%	35%	55%	16%

Table 1.25. Percentage participation in Extended Writing by administration type and disability

	MR	HI	VI	DB	CD	ED	OI	TBI	OHI	ASD	SLD
Standard	37%	58%	18%	0%	73%	77%	20%	31%	65%	42%	84%
Scaffold	63%	42%	82%	100%	27%	23%	80%	69%	35%	58%	16%

Table 1.26. Percentage participation in Extended Science by administration type and disability

	MR	HI	VI	DB	CD	ED	OI	TBI	OHI	ASD	SLD
Standard	40%	62%	6%	0%	84%	85%	18%	59%	66%	38%	84%
Scaffold	60%	38%	94%	100%	16%	15%	82%	41%	34%	62%	16%

1.9 Participation by District

The percentages reflected in Figures 2.4 through 2.9 are based on district assessment participation data reported in the Assessment section of the Reports page on the Oregon Department of Education's website.

Mathematics (Figures 2.4 - 2.5):

- 70 districts tested ten or less students
- 21 districts tested 11 20 students
- 13 districts tested 21 30 students
- 10 districts tested 31 40 students
- 8 districts tested 41 50 students
- 9 districts tested 50 99 students
- 9 districts tested 100 or more students

In 2007-2008 Portland SD (474), Salem-Keiser SD (456), Beaverton SD (263), and Hillsboro SD (226) tested the most students in Extended Mathematics.

Figure 1.4.



Percentages of Total District Assessment Participants who took Extended Mathematics in Districts Testing 50-99 Students

Figure 1.5.



Percentages of Total District Assessment Participants who took Extended Mathematics in Districts Testing >99 Students

Reading (Figures 2.6 - 2.7)

- 71 districts tested ten or less students
- 19 districts tested 11 20 students
- 14 districts tested 21 30 students
- 8 districts tested 31 40 students
- 9 districts tested 41 50 students
- 10 districts tested 50 99 students
- 12 district tested 100 or more students

In 2007-2008 Salem-Keiser SD (534), Portland SD (532), Hillsboro SD (318), and Beaverton SD (294) tested the most students in Extended Reading.

Figure 1.6.



Percentages of Total District Assessment Participants who took Extended Reading in Districts Testing 50-99 Students

Figure 1.7.



Percentages of Total District Assessment Participants who took Extended Reading in Districts Testing >99 Students

Science (Figure 2.8):

- 87 districts tested ten or less students
- 19 districts tested 11 20 students
- 13 districts tested 21 50 students
- 4 districts tested over 50 students

In 2007-2008 Portland SD (147), Salem-Keiser SD (128), Beaverton SD (87), and Hillsboro SD (68) tested the most students in Extended Science.

Figure 1.8.

Redmond SD 2J 2.3% Greater Albany Public SD 8J 1.8% Reynolds SD 7 1.8% 1.6% *Portland SD 1J Hillsboro SD 1J 1.5% *Salem-Keizer SD 24J 1.4% Medford SD 549C 1.3% 1.1% Beaverton SD 48J North Clackamas SD 12 1.1% Tigard-Tualatin SD 23J 1.1% Bend-LaPine Admin. SD 1 1.0% Eugene SD 4J 1.0% 0.0% 0.5% 1.0% 1.5% 2.0% 2.5%

Percentages of Total District Assessment Participants who took Extended Science in Districts Testing >30 Students

Writing (Figure 2.9):

- 82 districts tested ten or less students
- 22 districts tested 11 20 students
- 15 districts tested 21 50 students
- 6 districts tested over 50 students

In 2007-2008 Portland SD (209), Salem-Keiser SD (185), Beaverton SD (118), and Hillsboro SD (103) tested the most students in Extended Writing.

Figure 1.9.



Percentages of Total District Assessment Participants who took Extended Writing in Districts Testing >30 Students

Chapter 2. Standard Setting

2.1 Background

As detailed in the state's assessment documentation, Oregon's Extended Assessment consists of four subject area assessments Reading, Writing, Mathematics, and Science. All assessments are performance assessments requiring an active student response whether by selecting from a list of responses, or by responding to a standardized question posed by the examiner. With the exception of some items in Extended Science which are scored dichotomously, all items are scored on a scale of 0, 1, or 2. Items are scored according to scoring rubrics outlined in the administration manual and on the scoring protocol used during administration. Each assessment consists of 50 content items and 10 prerequisite items. Field test items may either be embedded within tasks or presented as a consolidated task at the end of a test. Students taking the assessment are expected to complete all of the items in the grade-band assessment as long as they are able to continue to make meaningful progress, for students unable to take the full assessment based on skill-level, a minimum number of items must be taken in order for the assessment to count toward state participation.

Student performance on these assessments is based on Item Response Theory (IRT) scaling which places student ability and item difficulty on the same scale. Within the assumptions of IRT modeling, a student's score provides information regarding the probability of his or her answering a given item on the assessment correctly. Item maps (and ordered item booklets) provided to the panelists during standard setting also provide information regarding the item's scale location so that panelists are able to use this information in their determinations. A sample item map for elementary mathematics is included in Appendix 4.A.

Oregon's Extended Assessment items are linked to the state's grade level academic content standards though federal guidelines provided for this assessment allow for necessary reductions in depth, breadth, and complexity of those standards to ensure access for students with the most significant cognitive disabilities. The standard setting for this assessment ensured that panelists had full access to the state's content standards during their deliberations as well as to test specification documents indicating the process of reducing depth, breadth, and complexity of content.

Oregon's Academic Content Standards are available on the state's web site via the state's Searchable Standards Tool that allows you to locate, view, and export standards by subject, grade level (benchmark), and/or strand (subtopic or Score Reporting Category, [SRC]) at http://www.ode.state.or.us/teachlearn/real/standards/.

2.2 Oregon's Academic Achievement Standards

In June of 2008, Oregon updated its achievement standards for all grades in the content areas of Math, Reading/Literature, and Science following additional revisions to its alternate assessment system in that same year. Though the state made significant updates to the assessment system in 2006-2007, additional changes were anticipated and conducted in 2007-2008. These additional changes predominantly involved the separation of the middle-school assessment from the high-school assessment for all grades. The related changes to the achievement standards based on these updates were therefore greatest in the middle and high assessments. Standards set for assessments at the elementary level in 2007 were validated during this 2008 standard-setting session.

The State Board of Education reviewed and adopted the recommended achievement standards in June of 2008. Following adoption by the Board, alternate achievement standards were applied to student tests administered during the 2007–2008 school year. Achievement standards were applied at each individual grade level.

In keeping with the state's general assessment, the alternate achievement standards for the alternate assessment refer to four levels of achievement – "Exceeds," "Meets," "Nearly Meets," and "Does Not Yet Meet." General category descriptors specific to the state's alternate assessments for each level are provided below.

Category	Description
Exceeds	For students taking the Extended Assessment scores at this level indicate a strong understanding of reduced depth, breadth, and complexity items as well as consistent academic performance.
Meets	For students taking the Extended Assessment scores at this level indicate a frequent understanding of reduced depth, breadth, and complexity items and relatively consistent academic performance.
Nearly Meets	For students taking the Extended Assessment scores at this level indicate an inconsistent or fragmented understanding of reduced depth, breadth and complexity items and inconsistent academic performance.
Does Not Yet Meet	For students taking the Extended Assessment scores at this level indicate a minimal to no reliable understanding of the academic material

Table 2.1 Achievement level category descriptions

2.3 Standard Setting

2.3.1 Recruitment and participation:

Over 1800 individuals were contacted directly by email. Information was also available online, and was disseminated via trainings. Emails were sent to special education directors, district test coordinators, and special and general educators trained to use the assessment. Thirty-three (33) individuals constituted the final panel. Expert participants included administrators, special and general education teachers, school psychologists, state specialists, and university researchers.

2.3.2 Participants

All participants were currently or formerly employed in the field of education with significant Special Education experience. Years of experience in the field of education ranged from 3 to 35 years (Median: 14 years; Bi-Mode: 3 years and 21 years; Mean: 15 years). In addition, all participants had a general familiarity with the Extended Assessment prior to the meeting as determined by application survey questions. The demographic representation of the panelists based on their roles in their respective districts is included in Appendix 4.B.
For the activities presented during the day, individuals were required to divide into four groups representing the four subject areas Reading, Mathematics, Writing, and Science. Each group evaluated standards for all three of the grade levels. Individuals self-selected groups based on level of expertise and experience within the subject. Sixteen individuals on the panel had previously served on item review, standard-setting, or content panels for the statewide assessment.

Achievement standards were reestablished for all subjects following the schedule below.

Table 2.2. Summary of Alternate Assessment Standard Setting Panel Meetings 2008

	Grade (spans)	Number of panelists	Dates
Reading	3 – 5, and 6 – 8, 10	9	June 2 nd and 3 rd 2008
Math	3 – 5, and 6 – 8, 10	7	June 2 nd and 3 rd 2008
Science	5, 8, 10	7	June 2 nd and 3 rd 2008
Writing	4, 7, 10	8	June 2 nd and 3 rd 2008

In addition to the selected participants, participation included state content specialists from the department of education, the state Director of Assessment, the department psychometrician, and researchers from the University of Oregon responsible for the development of the assessment.

2.3.3 Goals

The goals for the standard-setting panel were as follows:

- Review Achievement Level Descriptors: what students should know and be able to do in terms of the Oregon Academic Content Standards and as measured by the state assessments at each grade, in each subject, and at the "Does Not Yet Meet," "Nearly Meets," "Meets," and "Exceeds" levels.
- Consider the difficulty and content of each of the assessment items relative to what students should know and be able to do in terms of the Oregon Academic Content Standards and propose cutscores
- Consider impact data describing the implications of the proposed cut scores.
- Provide recommendations to the Oregon State Board of Education on the appropriate placement of the achievement levels for each test.

To meet these goals, Oregon stakeholders and educators reviewed each of the tests and recommended cut scores for each assessed grade. The panel used IRT score ordering, experience-based judgment, and student impact data to determine the placement of each cut score by grade and subject.

2.3.4 Structure of the Day

Achievement Level Descriptor Review – In 2006 – 2007 the standard setting panel developed and recommended Achievement-Level Descriptors for the population targeted by the alternate assessments within each of the following achievement levels: Does Not Yet Meet, Nearly Meets, Meets, and Exceeds. These achievement level descriptors were reviewed and adopted by the State Board of Education. As in the initial activity in 2007-2008, the subject level groups were instructed

to review and edit the Extended Assessment Achievement Level Descriptors (ALDs). Minor edits were made to the ALDs. A copy of the Alternate Achievement Level Descriptors is available in Appendix 4.C. As panelists reviewed the ALDs they were asked to consider the student they consider minimally competent in the reduced breadth, depth, and complexity (RBDC) assessment using the following guidelines:

- 1. Is this language clear enough to communicate student performance to parents?
- 2. Does the definition accurately capture a reasonable expectation for this population, at this grade, in keeping with the grade level content standards (RBDC)?
- 3. Is the expectation for this population a sufficiently appropriate parallel to expectations for students taking the general benchmark assessment?
- 4. What is the minimum that a successful student with significant cognitive disabilities should be able to demonstrate? (by grade)

Assessment Overview – Prior to the standard setting exercise, the panel was presented with a pretest to determine their level of familiarity with the assessment. The average score of this assessment was 7.6 out of a total of 9 possible points (range 5 - 9 points). The panel was then given a brief overview of the alternate assessment and each table/subject area was provided with copies of the assessment to review. The overview covered the assessment's purpose, its role, its use and a general description of the administration and scoring including a brief description of the alternate achievement standards as previously set and the impact of the previously assigned alternate achievement standards on the students by grade. Following this overview, the panelists were presented with a post-test of their familiarity with the assessment. Mild improvements were seen from pre-test (7.6) to post-test (8.0).

Discussions of Unique Features –Oregon's alternate assessment has a number of unique features that required separate consideration by a stakeholder group. These considerations were made during the first standard setting session following the adoption of the current structure of the Extended Assessments. These decisions are intended to remain in place unless there is a substantial change to the structure of the assessment. The unique features and the assumptions about these features are as follows (1) Prerequisite Skills: Prerequisite Skills will not be included in the final score of content, (2) Levels of Independence for Access: Levels of Independence for Access will not be included in the final score of content, and (3) Standard Administration vs. Scaffold Administration: Standard vs. Scaffold administrations are considered equivalent for the purposes of standard setting.

The results of these ratings are included in Appendices 4.I - 4.K respectively. Summaries of the discussions are as follows.

Prerequisite Skill Summary – Adopted from the previous year's review, in general panelists understood the role of the prerequisite skills. In general panelists did not believe prerequisite skills measure grade level content. In general panelists believed that without the prerequisite skills evaluation, some students would not be able to access the content prompts. In general panelists did not believe prerequisite skills should be included in determining proficiency in the content. (See table below)

Table 2.3: Prerequisite Skills Confidence

Statement I am confident:	Rating (1 – 4)
In my understanding of the role of the Prerequisite Skills in the Extended Assessment	3.875
Prerequisite skills measure grade level content material	1.5
Some students would be unable to access the content prompts without the Prerequisite Skills evaluation	3.375
Oregon should include the Prerequisite Skills in determining proficiency in this content area in 2006-2007	1.75

Independence for Access Summary – Adopted from the previous year's review, in general panelists understood the role of the Independence for Access Score. In general panelists did not believe that Level of Independence for Access reflects any grade level content. In general panelists believed that higher levels of independence reflect greater skill for this population. In general panelists were more inclined toward not including Level of Independence for Access into a proficiency determination. (See table below)

Table 2.4: Independence for Access Confidence

Statement I am confident:	Rating (1 – 4)
In my understanding of the role of the Independence for Access score in the Extended Assessments	3.875
The Independence for Access score reflects grade level content	1.5
Higher Independence for Access scores reflect greater skill for this population	2.75
Oregon should include information from Independence for Access in determining proficiency in this content area	1.75

Scaffold vs. Standard Summary – Adopted from the previous year's review, in general panelists understood the role played by the two different administrations of the assessments. In general, panelists believed that taken as a whole both administrations reflect the same content (with some item specific exceptions). In general panelists believed that the Scaffold Administration does not test skills that are innately different from those tested by the standard administration. Overwhelmingly panelists believed that there is a population of students for whom the Scaffold administration is critical. Panelists were inclined toward continuing to allow the Standard Administration of the Extended Assessment to serve as the "default" assessment. (See table below)

Table 2.5: Standard vs Scaffold Confidence

Statement I am confident:	Rating (1 - 4)
In my understanding of the role of the two different administrations of this assessment	3.875
Taken as a whole assessment, both administrations reflect the same content	3.625
The scaffold administration does not test a skill that is innately different from the standard administration	3.375
There is a population of students for whom the scaffold administration is critical	4
The standard administration is the appropriate "default" administration	2.875

2.3.4 Process

Training – The Bookmarking standard setting procedure was explained to the panelists in a training format. In addition to a copy of the presentation, panelists also received a copy of a guiding handbook (Appendix 4.D) that was used as a reference throughout the process.

Elementary standards were validated from the previous year's standards by providing panelists with the previous year's calibrated cutscores as a starting point and asking them to make a judgment based on the continued appropriateness of the placement. Standard setting for each of the other grade levels (middle and high) was achieved in three rounds over the course of the two day session.

Materials – Panelists used ordered item booklets to indicate cutscores. Ordered item booklets contained one item per page. Each page reflected the item and the item "category measure"¹ (whether representing a 1-point score or a 2-point score), and the score rubric (what type of student response constituted a score at the given value). As a result, each booklet had 100 pages. Each page reflected the item/score sequence of all category measures. Each page displayed the category measure (based on the Rasch partial credit model). Technical documentation detailing the calibration and analysis process will be available as part of this state report.

2.3.5 Round 1 Bookmark Placement

Participants used two primary tools when determining the placement of their bookmarks: the achievement-level descriptors, and the content as represented by the items on the test. Participants were also encouraged to refer to the assessment, the content standards, and their training materials during the process.

Participants at each table studied each of the items in the ordered item booklet in terms of what each item measures and why it is more difficult than the items preceding it. Each subject level group came to consensus on the construct and content of what each item measured, however, the first round of each decision making session required *individual* judgments. Panelists made decisions on a

¹ The category measure is the parameter produced by Rasch partial credit model that represents the ability measure implied by a given rating on a given item in Linacre, J. M. (2006). A user's guide to WINSTEPS MINISTEP Rasch-model computer programs: Program manual .Chicago, http://www.winsteps.com.

cutscore by placing their bookmark to separate categories (e.g. nearly meets from meets). The training required panelists to consider the following information and used it in their decision-making.

- 1) What makes this item more difficult than the one before it?
- 2) In summarizing the information prior to this bookmark, does the information adequately describe the ALD for this category?
- 3) What knowledge, skill, and ability must be applied correctly to respond to this item?

Panelists worked independently to determine the point that dividing those items that should be mastered (for minimal entry into the category) from those items that would be considered too difficult (for the minimally qualified individual at the given performance level or category). Panelists placed three bookmarks to represent the four categories: Does not yet meet, nearly meets, meets, exceeds. Panelists used the page number on the page following the bookmark to reflect the first item in the new category and to indicate that students would be required to demonstrate mastery of all preceding items in order to obtain category membership in the next category.

	Nearly Meets						Meets					Exceeds									
Grade	3	4	5	6	7	8	10	3	4	5	6	7	8	10	3	4	5	6	7	8	10
Math	5	19	25	6	10	18	8	18	25	32	15	23	27	17	33	37	53	29	32	36	49
Reading	11	34	42	8	20	32	21	38	52	59	31	46	61	60	69	82	89	52	83	91	85
Writing		19			19		19		37			40		38		79			78		78
Science			27			21	29			65			51	62			93			87	92

Table 2.6: Round 1 Group Medians (by page number)

2.3.6 Round 2 Bookmark Placement

Round two required the groups to compare and discuss cutscores by grade group. Each individual presented their findings and justifications to the group a scribe documented the nature of the justifications. Summaries of final table notes and relevant justifications are included in Appendix 4.E. The table leader consolidated scores on a single list and members of the group considered the whole range of possibilities suggested by the group. Discussion at this level incorporated the definition of the category label and ALD description to guide the boundaries. Discussion also incorporated individual decisions regarding the skill base that distinguished category members. Following this round of review, panelists re-visited their judgments and created new cutpoints if judgments were incongruent. If different from one another, the cutpoints suggested following this round were replaced with the group median score. Groups were allowed to present any consensus judgment. In some cases the consensus judgment was an average of the group scores.

	Nearly Meets						Meets					Exceeds									
Grade	3	4	5	6	7	8	10	3	4	5	6	7	8	10	3	4	5	6	7	8	10
Math	5	19	25	6	10	15	8	18	25	32	15	23	27	17	33	37	53	26	32	36	49
Reading	11	34	42	9	19	32	27	38	52	59	39	48	62	56	69	82	89	68	81	89	83
Writing		19			21		20		37			41		38		79			77		80
Science			27			21	29			65			45	53			93			87	86

Table 2.7: Round 2 Group Consensus (by page number)

2.3.7 Round Three Bookmark Placement

Round 3 allowed for data-based adjustments to be made based on student impact data. Immediately following round two, the facilitation team calculated the estimated student impact of Round 2 cutscores based on the calibrated values. Impact data was defined for participants as the percentages of students who would be classified in each achievement level at each grade for each subject based on the median bookmarks. Individuals were then able to incorporate this outcome data into their decision making process and to refine scores for their final round three decisions. Round three discussions incorporated policy level discussion surrounding "appropriate" percentages per grade per subject. Divergent or counterintuitive bookmarks were replaced with group medians. Some groups elected to use averages and gained consensus via averaging. More changes were noted (across subjects) between rounds 1 and 2, than between rounds 2 and 3.

	Nearly Meets						Meets					Exceeds									
Grade	3	4	5	6	7	8	10	3	4	5	6	7	8	10	3	4	5	6	7	8	10
Math	5	19	25	6	10	15	8	18	25	32	9	23	27	17	33	37	53	30	34	38	49
Reading	11	34	42	9	19	32	27	38	52	59	39	48	62	56	69	82	89	79	83	89	83
Writing		19			21		20		37			41		38		79			77		80
Science			27			21	29			65			45	62			93			87	92

Table 2.8: Round 3 Group Consensus (by page number)

2.3.8 Formal Adoption of Challenging Content Standards

Finally, the State Board of Education held a formal hearing to address the reestablishment of the performance standards; during this hearing, Board members reviewed the draft performance standards and received relevant information from ODE staff in support of the process and the outcome.

Final Cut Scores – The final Board-approved cut scores are available on the Department's Web site at http://www.ode.state.or.us/news/announcements/announcement.aspx?=3930 and are described below. Contrary to the page number format presented earlier in this report, the tables below are presented as the scale-scores.

Scale scores in the tables below were created by multiplying student ability estimates on the logit scale by 10 and adding 100.

Grade	Does Not Yet Meet	Nearly Meets	Meets	Exceeds
3	96 and below	97 – 102	103 – 112	113 and above
4	100 and below	101 – 106	107 – 115	116 and above
5	104 and below	105 – 109	110 – 118	119 and above
6	96 and below	97 – 102	103 – 115	116 and above
7	97 and below	98 – 105	106 – 116	117 and above
8	101 and below	102 – 111	112 – 119	120 and above
10	100 and below	101 - 110	109 - 120	121 and above

Table 2.9:	Reading:	Scaled	Scores
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Table 2.10: Mathematics: Scaled Scores

Grade	Does Not Yet Meet	Nearly Meets	Meets	Exceeds
3	89 and below	90 – 96	97 – 102	103 and above
4	96 and below	97 – 99	100 – 102	103 and above
5	99 and below	100 – 101	102 – 107	108 and above
6	94 and below	95 – 95	96 – 100	101 and above
7	95 and below	96 – 97	98 – 100	101 and above
8	96 and below	97 – 98	99 – 102	103 and above
10	94 and below	95 – 98	99 - 105	106 and above

Table 2.11: Science: Scaled Scores

Grade	Does Not Yet Meet	Nearly Meets	Meets	Exceeds
5	99 and below	100 - 107	108 - 116	116 and above
8	88 and below	89 - 95	96 - 113	114 and above
10	90 and below	91 - 106	107 - 113	114 and above

Table 2.12: Writing: Scaled Scores

Grade	Does Not Yet Meet	Nearly Meets	Meets	Exceeds
4	93 and below	94 – 103	104 – 117	118 and above
7	98 and below	99 – 103	104 – 120	121 and above
10	97 and below	98 - 102	103 - 121	122 and above

Outcomes – Following the standard setting, panelists were asked to evaluate the process and outcomes of the three day session. The results of that evaluation are included in the table below. Overall participants were pleased and confident in their findings and found that the judgments were realistic and defensible.

1 able 2.15: Standard Setting Evaluation Feedback	Та	able	2.13:	Standard	Setting	Evaluation	Feedback
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Statement	Strongly Disagree	Disagree	Agree	Strongly Agree	Panel Average
1. The training materials were organized.	1	2	3	4	3.68
2. The process of making judgments for cut scores was clear.	1	2	3	4	3.21
3. By the time I began making judgments on cut scores, I knew how to administer and score the test.	1	2	3	4	3.82
4. By the time I began making judgments on cut scores, I understood the intended population served by this test.	1	2	3	4	3.71

5. The draft Achievement level (ALDs) descriptors were important in making the cut score judgments.	1	2	3	4	2.57
6. The outcome data helped articulate the	1	2	2	4	3.57
judgments made regarding the cut	I	2	3	4	
					3.64
7. Realistic (not overly-forced) consensus was reached on the small-group	1	2	3	4	
judgments for cut scores.					3.82
8. The cut scores being recommended to	1	2	3	4	
ODE are defensible.					3.68
9. The Extended Assessment with these recommended cut scores, provides a realistic measure of accountability for	1	2	3	4	
students with significant disabilities.					3.19

Confidence

Grade level summaries of panelsit confidence in their conclusion after each round per subject and grade is included in Appendices 4.F-4.I. In general, on a confidence scale of 1 - 4 (with 1 indicating limited confidence, and 4 indicating strong confidence), panelists rated their confidence in each of the rounds favorably. On average Reading rounds were rated 3.15, Mathematics rounds were rated 3.34, Writing rounds were rated an average confidence of 3.80, and Science rounds were rated an average confidence of 3.81.

Potential Impact of Proposed Cutscores – The potential impact of the cutscores proposed by the standard setting panel was calculated according to the percentile ranking of each cutscore. The approximate percentage of students who would fall into each category based on the proposed cutscore was evaluated for statewide impact and comparison to general assessment percentages.

When presented with the impact data, even impact data that placed only 23% of the HS Science into the meets or exceeds category, panelists maintained their confidence in the process and the test and determined that the standards were defensible in light of the expectation that schools and districts move toward instruction that is in line with grade-level content standards as required by the assessment.

Grade	Does Not Yet Meet	Nearly Meets	Meets	Exceeds	Meets or Exceeds
3	19%	16%	35%	31%	66%
4	19%	13%	35%	33%	68%
5	27%	13%	30%	29%	59%
6	20%	12%	38%	30%	68%
7	23%	19%	30%	28%	58%
8	34%	24%	25%	18%	43%
10	36%	16%	28%	21%	49%

 Table 2.14: Extended Reading Impact by Grade 2007-2008

 Table 2.15: Extended Mathematics Impact by Grade 2007-2008

Grade	Does Not Yet Meet	Nearly Meets	Meets	Exceeds	Meets or Exceeds
3	18%	18%	31%	33%	64%
4	32%	10%	16%	42%	58%
5	37%	9%	30%	24%	54%
6	37%	5%	33%	25%	59%
7	38%	11%	23%	28%	51%
8	51%	11%	21%	17%	38%
10	35%	15%	34%	17%	50%

Grade	Does Not Yet Meet	Nearly Meets	Meets	Exceeds	Meets or Exceeds
5	21%	23%	35%	22%	56%
8	14%	6%	71%	9%	80%
10	19%	59%	18%	5%	23%

 Table 2.16: Extended Science Impact by Grade 2007-2008

 Table 2.17: Extended Writing Impact by Grade 2007-2008

Grade	Does Not Yet Meet	Nearly Meets	Meets	Exceeds	Meets or Exceeds
4	23%	22%	46%	9%	55%
7	34%	13%	45%	8%	53%
10	37%	9%	44%	10%	54%

Appendix 2.A. Mock of Elementary Mathematics Item Map

Code	Task	Item #	Prompt	Calib	Page	Scale Score	round
EM1	Elementary Mathematics Task 1	1	What is this number? Count to five 1. 1 = One answer correct	-3.66	1	63.4	63
EM2	Elementary Mathematics Task 1	1	What is this number? Count to five 1. 2 = Both answers correct: 5 and 1,2,3,4,5	-2.25	2	77.5	78
EM71	Elementary Mathematics Task 8	1	How many boxes are shaded? How many are white? 1 = One answer correct	-2.13	3	78.7	79
EM31	Elementary Mathematics Task 4	1	How many sides does a triangle have? Which shape is a triangle? 1 = One answer correct	-2.10	4	79	79
EM35	Elementary Mathematics Task 4	3	Which shape is a square? How many sides does a square have? 1 = One answer correct	-1.55	5	84.5	85
EM11	Elementary Mathematics Task 2	1	Find the answer. 1 = reversed or barely legible 5	-1.51	6	84.9	85
EM3	Elementary Mathematics Task 1	2	Put these numbers in order from least to greatest (small to large). If necessary, ask, "which is smallest?" And then, "which is next smallest?" 1 = any 3 digits in correct order	-1.46	7	85.4	85
EM9	Elementary Mathematics Task 1	5	Count by 5's. I'll start: 5, 10, 15 keep going. 1 = counts to 20	-1.40	8	86	86
EM21	Elementary Mathematics Task 3	1	What time is on this clock? 1= student says "300"	-1.38	9	86.2	86
EM5	Elementary Mathematics Task 1	3	What number comes before 10 in this list of numbers? What is the second number? 1 = One answer correct	-1.28	10	87.2	87

School District	Count of Students in District	American Indian/ Alaskan Native	Asian/ Pacific Islander	African American	Hispanic	White	Multi- Ethnic	Female	Male	Not Receiving Special Ed -	Receiving Special Ed
Eugene 4j SD	9304	2%	5%	3%	7%	71%	5%	50%	50%	84%	16%
Astoria SD	995	1%	1%	1%	8%	14%	0%	48%	52%	82%	18%
Beaverton SD	19816	1%	13%	3%	16%	60%	7%	49%	51%	87%	13%
Bend-LaPine SD	8168	1%	2%	1%	8%	87%	0%	49%	51%	84%	16%
Bethel 52 SD	3244	2%	2%	2%	13%	77%	1%	49%	51%	82%	18%
Colton 53 SD	398	2%	1%	0%	4%	92%	1%	49%	51%	83%	17%
Eugene SD	9304	2%	5%	3%	7%	71%	5%	50%	50%	84%	16%
Greater Albany SD	4858	1%	2%	1%	13%	81%	0%	49%	51%	86%	14%
Gresham Barlow SD	6506	1%	4%	3%	17%	73%	2%	49%	51%	86%	14%
Jefferson County SD	1592	29%	1%	1%	33%	33%	0%	48%	52%	88%	12%
Klamath Falls SD	1820	8%	2%	2%	15%	72%	1%	50%	50%	84%	16%
Lincoln County SD	2923	9%	2%	1%	10%	71%	0%	48%	52%	82%	18%
McMinnville SD	3361	1%	2%	1%	27%	67%	0%	50%	50%	86%	14%
Morrow SD	1143	1%	0%	1%	44%	54%	0%	48%	52%	85%	15%
Newberg SD	2789	1%	2%	1%	12%	84%	0%	48%	52%	85%	15%
Parkrose SD	1846	2%	18%	15%	17%	47%	2%	48%	52%	85%	15%
Portland Public SD	23269	2%	11%	12%	13%	56%	1%	50%	50%	84%	16%
Redmond SD	3721	1%	1%	1%	13%	83%	0%	50%	50%	86%	14%
Tigard-Tualitin SD	6849	1%	7%	2%	18%	70%	2%	49%	51%	89%	11%
Woodburn SD	2655	0%	1%	0%	74%	25%	0%	50%	50%	85%	15%

Table Appendix 2.B: Demographic Representation by District

This includes educators representing school districts whose total student population is approximately 45% of the statewide total for ELA.

Table Appendix 2.F: Panelist Confidence in Reading Judgments

Round	Reading Elementary Confidence	Avg. NM	Avg M	Avg E
			0	
1	I am confident in the outcome of this round and the relevant			
I	justifications used to make this judgment.	4	3	2.5
	I am confident in the outcome of this round and the			
2	relevant justifications used to make this judgment.	4	3	
3	I am confident in the outcome of this round and the relevant	2	15	2
Round	Middle School Confidence	4	1.3	4
Round				
	I am confident in the outcome of this round and the relevant			
1	justifications used to make this judgment.	3	3	2.8
	I am confident in the outcome of this round and the			
2	relevant justifications used to make this judgment.	3.4	2.8	3.2
	I am confident in the outcome of this round and the relevant			
3	justifications used to make this judgment.	3.0	3.8	3.8
Round	High School Confidence			
	I am confident in the outcome of this round and the relevant			
1	justifications used to make this judgment.	3.0	3.0	3.0
2	I am confident in the outcome of this round and the	25	35	25
Z		3.5	3.5	3.5
	I am confident in the outcome of this round and the relevant			
3	justifications used to make this judgment.	3.8	3.8	3.8

Table Appendix 2.G: Panelist Confidence in Mathematics Judgments

		Avg.		Avg
Round	Math Elementary Confidence	NM	Avg M	E
	I am confident in the outcome of this round and the relevant		_	-
1	justifications used to make this judgment.	3	4	3
	I am confident in the outcome of this round and the			
2	relevant justifications used to make this judgment.	3	3	3
	I am confident in the outcome of this round and the relevant			-
3	justifications used to make this judgment.	3	3	3
Round	Middle School Confidence	-		
	I am confident in the outcome of this round and the relevant			
1	justifications used to make this judgment.	3.5	3.3	3.5
	I am confident in the outcome of this round and the			
2	relevant justifications used to make this judgment.	3.7	3.3	3.7
	I am confident in the outcome of this round and the relevant			
3	justifications used to make this judgment.	3.5	3.7	3.3
Round	High School Confidence			
	I am confident in the outcome of this round and the relevant			
1	justifications used to make this judgment.	3.0	3.1	2.7
	I am confident in the outcome of this round and the			
2	relevant justifications used to make this judgment.	3.4	3.4	3.3
	I am confident in the outcome of this round and the relevant			
3	justifications used to make this judgment.	3.9	3.9	3.9

Table Appendix 2.H: Panelist Confidence in Writing Judgments

Round	Writing Elementary Confidence	Avg. NM	Ανσ Μ	Avg E
Round	Witting Elementary connuclee	1111	1105 101	Ľ
	I am confident in the outcome of this round and the relevant			
1	justifications used to make this judgment.	3.6	3.7	3.6
	I am confident in the outcome of this round and the		• •	• •
2	relevant justifications used to make this judgment.	3.9	3.9	3.9
	I am confident in the outcome of this round and the relevant			
3	iustifications used to make this judgment	3.9	3.9	3.9
Round	Middle School Confidence			
	I am confident in the outcome of this round and the relevant			
1	justifications used to make this judgment.	4.0	4.0	4.0
	I am confident in the outcome of this round and the	10	10	10
2	relevant justifications used to make this judgment.	4.0	4.0	4.0
	I am confident in the outcome of this round and the relevant			
3	iustifications used to make this judgment.	4.0	4.0	4.0
Round	High School Confidence			
	I am confident in the outcome of this round and the relevant			
1	justifications used to make this judgment.	3.7	3.5	3.7
2	I am confident in the outcome of this round and the		3 -	25
2	relevant justifications used to make this judgment.	3.6	3.5	3.5
	I am confident in the outcome of this round and the relevant			
3	justifications used to make this judgment.	3.4	3.2	3.7

Table Appendix 2.I: Panelist Confidence in Science Judgments

Round	Science Elementary Confidence	Avg. NM	Avg M	Avg E
	I am confident in the outcome of this round and the relevant			
1	justifications used to make this judgment.	3.8	3.8	3.8
	Lam confident in the outcome of this round and the			
2	relevant justifications used to make this judgment.	4	4	4
_	I am confident in the outcome of this round and the relevant			_
3	justifications used to make this judgment.	4	4	4
Round	Middle School Confidence			
	I am confident in the outcome of this round and the relevant			
1	justifications used to make this judgment.	3.6	3.6	3.6
	I am confident in the outcome of this round and the		• •	• •
2 relevant justifications used to make this judgment.		3.8	3.8	3.8
	I am confident in the outcome of this round and the relevant			
3	justifications used to make this judgment.	3.8	3.8	3.8
Round	High School Confidence			
1	I am confident in the outcome of this round and the relevant	2.5	2.5	2.7
1	justifications used to make this judgment.	3.7	3.7	3.7
	Lam confident in the outcome of this round and the			
2	relevant justifications used to make this judgment.	3.7	3.7	3.8
	I am confident in the outcome of this round and the relevant			
3	justifications used to make this judgment.	3.8	4.0	4.0

Appendix 2.C. Alternate Achievement Level Descriptors

Oregon's Alternate Achievement Level Descriptors describe what students know and can do based on their performance on the state's alternate assessments in the various content areas. These descriptors may be used by educators to target instruction and inform parents and students of the range of expectations for students with significant cognitive disabilities to be considered proficient at a particular grade level.

The Alternate Achievement Level Descriptors are based on a sampling of a larger set of content outlined in the Oregon Content Standards. Results for individual students are only one indicator of student ability as measured at the time of testing. These statements give a general description of what most students know and can do within a particular band of achievement based on a particular subset of content aligned to the general content standards but reduced in depth, breadth, and complexity.

Students who score at or within a particular level of achievement possess the bulk of the abilities described at that level.

The Achievement Level Descriptors described in this chapter refer only to alternate achievement, and therefore reflect achievement as measured by the state's alternate assessment.

Alternate Achievement Level Descriptors for each subject area were developed to parallel the Achievement Level Descriptors for the general education population while capturing an alternate set of expectations based on grade level content that has systematically been reduced in depth, breadth, and complexity. Category descriptions align to those used in the general education population: Exceeds, Meets, Nearly Meets and Does Not Yet Meet (Table 1). Expectations for this population reflect the state's commitment to holding all students to high standards of academic achievement.

The Alternate Achievement Level Descriptors do not represent academic expectations that are identical to the General Achievement Level Descriptors. While the state's general Achievement Level Descriptors refer and align to the grade level content standards directly, the Alternate Achievement Level Descriptors refer to the state's grade level content that is reduced in depth, breadth, and complexity via a process incorporated at the assessment development level.

Achievement Level Descriptors were developed by specialists at the department and were modeled on the format, language structure and design of the general Achievement Level Descriptors. The draft ALDs were circulated for initial review of structure, form, and essence. These edited ALDs were incorporated for thorough review by educators in conjunction with the standard setting session for the state's alternate assessment. In this session, educators familiar with the content expectations of this population (these individuals are described in the Standard Setting Chapter) were given authorship responsibility for the draft ALDs and invited to recommend content changes that adequately captured the expectations associated with each of the described categories (Exceeds, Meets, Nearly Meets, Does Not Yet Meet). During this level of the review, educators recommended substantial changes to develop consistency between the grade levels. The general structure, form, and essence (as linked to the general Achievement Level Descriptors) was not significantly impacted by this level of review. These ALDs were reviewed and given minor edits by the 07-08 standard setting panel.

Table 1: Category Descriptions

Category	Description
Exceeds	For students taking the Extended Assessment scores at this level indicate a strong understanding of reduced depth, breadth, and complexity items as well as consistent academic performance.
Meets	For students taking the Extended Assessment scores at this level indicate a frequent understanding of reduced depth, breadth, and complexity items and relatively consistent academic performance.
Nearly Meets	For students taking the Extended Assessment scores at this level indicate an inconsistent or fragmented understanding of reduced depth, breadth and complexity items and inconsistent academic performance.
Does Not Yet Meet	For students taking the Extended Assessment scores at this level indicate a minimal to no reliable understanding of the academic material

Table 2: Alternate and General "Meets" Descriptors by Subject: Reading

Grade	Reading Alternate	Reading General
Third	For students taking the Extended Assessment, scores at this level indicate an understanding of the academic concepts linked to the state's grade level content standards for Reading. Students demonstrate a relatively consistent comprehension of reduced complexity text, an understanding that meaning can be extracted from text, and are frequently able to extract meaning from text. Students demonstrate an understanding of the interaction between a reader and text.	Student scores at this level indicate a solid academic performance based on the grade level knowledge and skills outlined in the state content standards for Reading/Literature. Students who score at this level demonstrate an accurate comprehension of grade-level text and use context to make meaning of unfamiliar vocabulary. They recognize directly-stated problems and solutions and interpret text to determine themes and messages. They make accurate predictions based on textual evidence, and can identify directly-stated cause and effect relationships and opinions. They can draw conclusions about character traits and actions.
Fourth	For students taking the Extended Assessment, scores at this level indicate an understanding of the academic concepts linked to the state's grade level content standards for Reading. Students demonstrate a relatively consistent comprehension of reduced complexity text an understanding that meaning can be extracted from text, and are frequently able to extract meaning from text. Students demonstrate an understanding of the interaction between a reader and text.	Student scores at this level indicate a solid academic performance based on the grade level knowledge and skills outlined in the state content standards for Reading/Literature. These students have an accurate comprehension of grade-level text and use context to make meaning of unfamiliar vocabulary. They interpret text to determine themes and messages, analyze characters, and make accurate predictions based on textual evidence. They can identify the author's purpose and the presence of persuasion in informational text.
Fifth	For students taking the Extended Assessment, scores at this level indicate an understanding of the academic concepts linked to the state's grade level content standards for Reading. Students demonstrate a relatively consistent comprehension of reduced complexity text an understanding that meaning can be extracted from text, and are frequently able to extract meaning from text. Students demonstrate a consistent understanding of the interaction between a reader and text.	Student scores at this level indicate a solid academic performance based on the grade level knowledge and skills outlined in the state content standards for Reading/Literature. Students have an accurate comprehension of grade-level text and use context to make meaning of unfamiliar vocabulary. They interpret text to determine themes and messages, analyze characterization, and make accurate predictions. They can identify the author's purpose and the effect of elements and devices commonly used in literary text.

Table 2 (continued): Alternate and General "Meets" Descriptors by Subject: Reading

Grade	Reading Alternate	Reading General
Sixth	For students taking the Extended Assessment, scores at this level indicate an understanding of the academic concepts linked to the state's sixth grade level content standards for Reading. Students demonstrate a relatively consistent comprehension of reduced complexity text, and are frequently able to extract accurate meaning from text. Students who meet the standard demonstrate an understanding of the interaction between a reader and text by completing tasks on demand.	Student scores at this level indicate a solid academic performance based on the grade level knowledge and skills outlined in the state content standards for Reading/Literature. Students have an accurate comprehension of grade-level text and use context to make meaning of unfamiliar vocabulary. They interpret text to determine themes and messages, analyze characterization, and make accurate predictions. They can identify the author's purpose and the effect of elements and devices commonly used in literary text.
Seventh	For students taking the Extended Assessment, scores at this level indicate an identifiable understanding of the academic concepts linked to the state's seventh grade level content standards for Reading. Students demonstrate a relatively consistent comprehension of reduced complexity text and are frequently able to extract meaning from text. Students who meet the standard demonstrate an understanding of the interaction between a reader and text by completing tasks on demand.	Student scores at this level indicate a solid academic performance based on the grade level knowledge and skills outlined in the state content standards for Reading/Literature. Students have an accurate comprehension of grade-level text, including unfamiliar vocabulary, and can analyze information to form conclusions. They interpret text to determine themes and messages, make accurate predictions, and can identify the effect of an author's use of structural elements and common literary elements and devices.
Eighth	For students taking the Extended Assessment, scores at this level indicate an identifiable understanding of the academic concepts linked to the state's eighth grade level content standards for Reading. Students demonstrate a relatively consistent comprehension of reduced complexity text, an understanding that meaning can be extracted from text, and are frequently able to extract meaning from text. Students who meet the standard demonstrate an understanding of the interaction between a reader and text by completing tasks on demand.	Student scores at this level indicate a solid academic performance based on the grade level knowledge and skills outlined in the state content standards for Reading/Literature. Students have an accurate comprehension of grade-level text, including unfamiliar vocabulary, and can synthesize information to form conclusions. They interpret text to determine themes and messages, make accurate predictions, and can identify an author's reasons for structural decisions and the use of common literary elements and devices.

Table 2 (continued): Alternate and General "Meets" Descriptors by Subject: Reading

Grade	Reading Alternate	Reading General
Tenth	For students taking the Extended Assessment, scores at this level indicate an identifiable understanding of the academic concepts linked to the state's tenth grade level content standards for Reading. Students demonstrate a relatively consistent comprehension of reduced complexity text, an understanding that meaning can be extracted from text, and are frequently able to extract meaning from reduced complexity text. Students who meet the standard are able to demonstrate an understanding of the interaction between a reader and text by completing tasks on demand.	Student scores at this level indicate a solid academic performance based on the grade level knowledge and skills outlined in the state content standards for Reading/Literature. Students have an accurate comprehension of grade-level text, including unfamiliar vocabulary. They interpret text to determine themes and messages; make accurate predictions; and can identify the author's purpose, reasons for structural choices; and the effects of common literary elements and devices.

Grade	Mathematics Alternate	Mathematics General
Third	For students taking the Extended Assessment, scores at this level indicate an understanding of the academic concepts linked to the state's grade-level content standards for mathematics. Students demonstrate a frequently consistent comprehension of reduced complexity numeric concepts, an understanding that numbers represent quantitative values, and are frequently able to demonstrate a consistent method of manipulating quantities to obtain a desired outcome. Students who meet the third-grade mathematics standard demonstrate an understanding of the relationship between number and value.	Student scores at this level indicate a solid academic performance based on the grade level knowledge and skills outlined in the state content standards for mathematics. Students consistently solve routine problems involving whole numbers and simple fractions; compare geometric figures; and describe data. In general, these students can interpret or provide a visual representation to match a problem situation.
Fourth	For students taking the Extended Assessment, scores at this level indicate an understanding of the academic concepts linked to the state's grade-level content standards for Mathematics. Students demonstrate a consistent comprehension of reduced complexity numeric concepts (i.e. numeric concepts that have been simplified, with reduced text and language where appropriate), an understanding that numbers represent quantitative values and are frequently able to demonstrate a consistent method of manipulating quantities to obtain a desired outcome. Students who meet the fourth-grade mathematics standard demonstrate an understanding of the relationship between number and value.	Student scores at this level indicate a solid academic performance based on the grade level knowledge and skills outlined in the state content standards for mathematics. Students consistently solve routine problems involving whole numbers, decimals and simple fractions; describe perimeter and area; compare geometric figures; translate a situation using numbers and symbols; and describe data. Generally, these students can interpret or provide a visual or symbolic representation to match a problem situation and purpose.
Fifth	For students taking the Extended Assessment, scores at this level indicate an understanding of the academic concepts linked to the state's grade-level content standards for mathematics. Students demonstrate a consistent comprehension of reduced complexity numeric concepts (i.e. numeric concepts that have been simplified, with reduced text and language where appropriate), an understanding that numbers represent quantitative values, and are frequently able to demonstrate a consistent method of manipulating quantities to obtain a desired outcome. Students who meet the fifth-grade mathematics standard demonstrate an understanding of the relationship between number and value.	Student scores at this level indicate a solid academic performance based on the grade level knowledge and skills outlined in the state content standards for mathematics. Students consistently solve routine problems involving whole numbers, decimals and percents; use formulas to find perimeter and area; compare geometric figures; and represent and interpret data. In general, these students can interpret or provide a visual or symbolic representation to match a problem situation and purpose.

Table 3: Alternate and General "Meets" Descriptors by Subject: Mathematics

Table 3 (continued): Alternate and General "Meets" Descriptors by Subject: Mathematics

Grade	Mathematics Alternate	Mathematics General
Sixth	For students taking the Extended Assessment, scores at this level indicate an ability to understand and apply academic concepts linked to the state's grade level content standards for Mathematics. Students demonstrate a consistent comprehension of number concepts. The student demonstrates both (1) an understanding that numbers represent quantitative values and (2) reliable use of mathematical operations to manipulate quantities. Students who meet the sixth-grade mathematics standard demonstrate an understanding of the relationship between number and value.	Student scores at this level indicate a solid academic performance based on the grade level knowledge and skills outlined in the state content standards for mathematics. Students consistently solve routine problems involving whole numbers, decimals and simple fractions; describe perimeter and area; compare geometric figures; write an equation to describe a situation; and describe data. In general, these students can interpret or provide a visual or symbolic representation to match a problem situation and purpose.
Seventh	For students taking the Extended Assessment, scores at this level indicate an ability to understand and apply academic concepts linked to the state's grade-level content standards for mathematics. Students demonstrate (1) an understanding that numbers represent quantitative values, (2) knowledge that mathematics can be used to answer questions beyond basic calculation and (3) a reliable use of mathematical operations to manipulate quantities. Students who meet the seventh grade mathematics standard demonstrate an understanding of the relationship between number and value.	Student scores at this level indicate a solid academic performance based on the grade level knowledge and skills outlined in the state content standards for mathematics. Students consistently solve routine problems applying mathematical properties of rational numbers; interpret algebraic equations; and interpret data using frequency distribution tables, box and- whisker plots, stem-and-leaf plots, and line graphs. In general, these students can interpret or provide a visual or symbolic representation to match a problem situation and purpose.
Eighth	For students taking the Extended Assessment, scores at this level indicate an ability to understand and apply academic concepts linked to the state's grade-level content standards for mathematics. Students demonstrate (1) an understanding that numbers represent quantitative values, (2) knowledge that mathematics can be used to answer questions beyond basic calculation, and (3) a reliable use of mathematical operations to manipulate quantities. Students who meet the eighth-grade mathematics standard demonstrate an understanding of the relationship between number and value.	Student scores at this level indicate a solid academic performance based on the grade level knowledge and skills outlined in the state content standards for mathematics. Students at this level consistently apply mathematical concepts, terms and properties to problem situations. Students readily solve problems involving rational numbers, proportions and percents, similar figures, algebraic representations, and interpreting probability and data. In general these students can interpret or provide a visual or symbolic representation to match a problem situation and purpose.

Table 3 (continued): Alternate and General "Meets" Descriptors by Subject: Mathematics

Grade	Mathematics Alternate	Mathematics General
Tenth	For students taking the Extended Assessment, scores at this level indicate an ability to understand and apply academic concepts linked to the state's grade-level content standards for mathematics. Students demonstrate (1) an understanding that numbers represent quantitative values, (2) knowledge that mathematics can be used to answer questions beyond basic calculation, and (3) a reliable use of mathematical operations to manipulate quantities. Students who meet the tenth-grade mathematics standard demonstrate an understanding of the relationship between number and value.	Student scores at this level indicate a solid academic performance based on the grade level knowledge and skills outlined in the state content standards for mathematics. Students consistently solve problems with various strategies. These students can reason mathematically, and generally have a firm understanding of algebraic and geometric concepts.

Grade	Science Alternate	Science General
Fifth	For students taking the Extended Assessment, scores at this level indicate an identifiable understanding of the academic concepts linked to the state's Benchmark 2 content standards for Science. Students demonstrate a relatively consistent recognition of the basic relationships evident in the natural world. Students who meet the Benchmark 2 Science standard demonstrate an initial/basic understanding of properties of matter, force and energy, and the basic structures, functions and interactions of living organisms in the environment.	Student scores at this level indicate a solid academic performance based on the benchmark level knowledge and skills outlined in the state content standards for Science. These students can explain and describe most fundamental properties of matter, force and energy and the basic structures, functions and interactions of living organisms in the environment. They can describe most of Earth's properties and can explain Earth's relationship in space.
Eighth	For students taking the Extended Assessment, scores at this level indicate an identifiable understanding of the academic concepts linked to the state's Benchmark 3 content standards for Science. Students demonstrate a relatively consistent recognition of the basic relationships evident in the natural world. Students who meet the Benchmark 3 Science standard demonstrate an applied understanding of properties of matter, force, energy, motion as well as the basic structures, functions and interactions of living organisms in the environment.	Student scores at this level indicate a solid academic performance based on the benchmark level knowledge and skills outlined in the state content standards for Science. These students can explain and describe properties of matter, force and energy and the structures, functions and interactions of living organisms in the environment. They can describe Earth's properties and how some of these properties change over time. Students can explain Earth's motion and its relationship in space.
Tenth	For students taking the Extended Assessment, scores at this level indicate an identifiable understanding of the academic concepts linked to the state's CIM level content standards for Science. Students demonstrate a relatively consistent recognition of the basic relationships evident in the natural world. Students who meet the CIM level Science standards demonstrate a general understanding of properties of matter, force and energy, and the basic structures, functions and interactions of living organisms in the environment.	Student scores at this level indicate a solid academic performance based on the benchmark level knowledge and skills outlined in the state content standards for Science. These students can mostly explain, describe and analyze the properties of matter, force and energy and the complex structures, functions and interactions of living organisms in the environment. They can describe and analyze Earth's properties and can accurately explain Earth's relationship in space and interaction with other objects in space.

Table 4: Alternate and General "Meets" Descriptors by Subject: Science

Alternate Achievement Level Descriptors (2007-2008)

The Alternate Achievement Level Descriptors reflect expectations for students with the most significant cognitive disabilities as reflected by performance on academic assessments that are reduced in depth, breadth, and complexity (*Oregon's Extended Assessments).

*Oregon's Extended Assessments are created by linking assessment items to the state's grade level content standards while reducing the assessed content in depth, breadth, and complexity. Reduced depth, breadth, and complexity items reflect simplified grammatical structures, simplified vocabulary, shortened length (reduced wordiness), increased inclusion of and reference to prerequisite skills, and increased scaffolding and support.

Grade	Reading	Mathematics	Science	Writing
Third	For students taking the Extended Assessment, scores at this level indicate an understanding of the academic concepts linked to the state's grade level content standards for Reading. Students demonstrate a relatively consistent comprehension of reduced complexity text, an understanding that meaning can be extracted from text, and are frequently able to extract meaning from text. Students demonstrate an understanding of the interaction between a reader and text.	For students taking the Extended Assessment, scores at this level indicate an understanding of the academic concepts linked to the state's grade- level content standards for mathematics. Students demonstrate a frequently consistent comprehension of reduced complexity numeric concepts, an understanding that numbers represent quantitative values, and are frequently able to demonstrate a consistent method of manipulating quantities to obtain a desired outcome. Students who meet the third-grade mathematics standard demonstrate an understanding of the relationship between number and value.	NA	NA
Fourth	For students taking the Extended Assessment, scores at this level indicate an understanding of the academic concepts linked to the state's grade level content standards for Reading. Students demonstrate a relatively consistent comprehension of reduced complexity text an understanding that meaning can be extracted from text, and are frequently able to extract meaning from text. Students demonstrate an understanding of the interaction between a reader and text.	For students taking the Extended Assessment, scores at this level indicate an understanding of the academic concepts linked to the state's grade- level content standards for Mathematics. Students demonstrate a consistent comprehension of reduced complexity numeric concepts (i.e. numeric concepts that have been simplified, with reduced text and language where appropriate), an understanding that numbers represent quantitative values and are frequently able to demonstrate a consistent method of manipulating quantities to obtain a desired outcome. Students who meet the fourth-grade mathematics standard demonstrate an understanding of the relationship between number and value.	NA	For students taking the Extended Assessment, scores at this level indicate an identifiable grasp of the academic concepts linked to the state's grade level content standards for Writing. Students demonstrate a relatively consistent ability to communicate through writing on selected tasks. Students who meet the standard demonstrate a basic understanding of the conventions, structures, and expectations associated with the act of creating the written text, and the process involved in creating a body of written work. Students demonstrate a basic understanding that text can be used to communicate as well as a working understanding of the interaction between a writer and his or her audience.

Summary of "Meets" Alternate Achievement Level Descriptors

Summary of "Meets" Alternate Achievement Level Descriptors (continued)

Grade	Reading	Mathematics	Science	Writing
Fifth	For students taking the Extended Assessment, scores at this level indicate an understanding of the academic concepts linked to the state's grade level content standards for Reading. Students demonstrate a relatively consistent comprehension of reduced complexity text an understanding that meaning can be extracted from text, and are frequently able to extract meaning from text. Students demonstrate a consistent understanding of the interaction between a reader and text.	For students taking the Extended Assessment, scores at this level indicate an understanding of the academic concepts linked to the state's grade-level content standards for mathematics. Students demonstrate a consistent comprehension of reduced complexity numeric concepts (i.e. numeric concepts that have been simplified, with reduced text and language where appropriate), an understanding that numbers represent quantitative values, and are frequently able to demonstrate a consistent method of manipulating quantities to obtain a desired outcome. Students who meet the fifth- grade mathematics standard demonstrate an understanding of the relationship between number and value.	For students taking the Extended Assessment, scores at this level indicate an identifiable understanding of the academic concepts linked to the state's Benchmark 2 content standards for Science. Students demonstrate a relatively consistent recognition of the basic relationships evident in the natural world. Students who meet the Benchmark 2 Science standard demonstrate an initial/basic understanding of properties of matter, force and energy, and the basic structures, functions and interactions of living organisms in the environment.	NA
Sixth	For students taking the Extended Assessment, scores at this level indicate an understanding of the academic concepts linked to the state's sixth grade level content standards for Reading. Students demonstrate a relatively consistent comprehension of reduced complexity text, and are frequently able to extract accurate meaning from text. Students who meet the standard demonstrate an understanding of the interaction between a reader and text by completing tasks on demand.	For students taking the Extended Assessment, scores at this level indicate an ability to understand and apply academic concepts linked to the state's grade level content standards for Mathematics. Students demonstrate a consistent comprehension of number concepts. The student demonstrates both (1) an understanding that numbers represent quantitative values and (2) reliable use of mathematical operations to manipulate quantities. Students who meet the sixth-grade mathematics standard demonstrate an understanding of the relationship between number and value.	NA	NA

Grade **Mathematics** Writing Reading Science Seventh For students taking the For students taking the Extended NA For students taking the Extended Assessment, scores at Assessment, scores at this level Extended Assessment, scores this level indicate an identifiable indicate an ability to understand at this level indicate an understanding of the academic and apply academic concepts linked identifiable understanding of the concepts linked to the state's to the state's grade-level content academic concepts linked to the seventh grade level content standards for mathematics. Students state's grade level content for standards for Reading. Students demonstrate (1) an understanding writing. Students demonstrate a demonstrate a relatively that numbers represent quantitative relatively consistent ability to consistent comprehension of values. (2) knowledge that communicate in writing. Students reduced complexity text and are mathematics can be used to answer who meet the standard frequently able to extract meaning guestions beyond basic calculation demonstrate a basic from text. Students who meet the and (3) a reliable use of understanding of simplified standard demonstrate an mathematical operations to conventions, structure, and understanding of the interaction manipulate quantities. Students who expectations associated with the between a reader and text by meet the seventh grade act of writing. Students completing tasks on demand. mathematics standard demonstrate demonstrate a basic an understanding of the relationship understanding of the interaction between number and value. between a writer and his or her audience. Eighth For students taking the For students taking the Extended For students taking the NA Assessment, scores at this level Extended Assessment, scores Extended Assessment, scores at this level indicate an identifiable indicate an ability to understand at this level indicate an and apply academic concepts linked understanding of the academic identifiable understanding of the concepts linked to the state's to the state's grade-level content academic concepts linked to the eighth grade level content standards for mathematics. Students state's Benchmark 3 content demonstrate (1) an understanding standards for Reading. Students standards for Science. Students that numbers represent quantitative demonstrate a relatively demonstrate a relatively consistent comprehension of values, (2) knowledge that consistent recognition of the reduced complexity text, an mathematics can be used to answer basic relationships evident in the understanding that meaning can be guestions beyond basic calculation, natural world. Students who extracted from text, and are and (3) a reliable use of meet the Benchmark 3 Science frequently able to extract meaning mathematical operations to standard demonstrate an applied from text. Students who meet the manipulate quantities. Students who understanding of properties of meet the eighth-grade mathematics standard demonstrate an matter, force, energy, motion as standard demonstrate an understanding of the interaction well as the basic structures. between a reader and text by understanding of the relationship functions and interactions of completing tasks on demand. between number and value. living organisms in the environment

Summary of "Meets" Alternate Achievement Level Descriptors (continued)

Grade	Reading	Mathematics	Science	Writing
Tenth	For students taking the Extended Assessment, scores at this level indicate an identifiable understanding of the academic concepts linked to the state's tenth grade level content standards for Reading. Students demonstrate a relatively consistent comprehension of reduced complexity text, an understanding that meaning can be extracted from text, and are frequently able to extract meaning from reduced complexity text. Students who meet the standard are able to demonstrate an understanding of the interaction between a reader and text by completing tasks on demand.	For students taking the Extended Assessment, scores at this level indicate an ability to understand and apply academic concepts linked to the state's grade-level content standards for mathematics. Students demonstrate (1) an understanding that numbers represent quantitative values, (2) knowledge that mathematics can be used to answer questions beyond basic calculation, and (3) a reliable use of mathematical operations to manipulate quantities. Students who meet the tenth-grade mathematics standard demonstrate an understanding of the relationship between number and value.	For students taking the Extended Assessment, scores at this level indicate an identifiable grasp of the academic concepts linked to the state's CIM level content standards for Science. Students demonstrate a relatively consistent recognition of the basic relationships evident in the natural world. Students who meet the CIM level Science standards demonstrate a general understanding of properties of matter, force and energy, and the basic structures, functions and interactions of living organisms in the environment.	For students taking the Extended Assessment, scores at this level indicate an identifiable understanding of the academic concepts linked to the state's grade level content for writing. Students demonstrate a relatively consistent ability to communicate in writing. Students who meet the standard demonstrate a basic understanding of simplified conventions, structure, and expectations associated with the act of writing. Students demonstrate a basic understanding of the interaction between a writer and his or her audience.

Summary of "Meets" Alternate Achievement Level Descriptors (continued)

Reading

Third Grade Reading

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Exceeds	Students who Exceed the alternate standard consistently:
Exceeds For students taking the Extended Assessment, scores at this level indicate a strong, consistent understanding of the academic concepts linked to the state's grade level content standards for Reading. Students demonstrate a consistent understanding that meaning can be extracted from text, and demonstrate a reliable method of extracting meaning from text. Students demonstrate an understanding of the interaction between a reader and text.	 Students who Exceed the alternate standard consistently: Demonstrate skills in decoding and recognizing words Read words in a reduced complexity connected text Demonstrate understanding of dictionary use via identification of appropriately formatted text Provide or identify the meaning of everyday words with the help of contextual clues Use contextual clues to understand information in simplified text that is read to them Interpret directions and procedures from informational text, recognize in a general manner its structural features, and extract some main ideas and details Use contextual information provided in simple text to predictably recognize cause and effect in a general or global manner Demonstrate a general understanding of literary text through listening comprehension
	diagrams, charts, and graphs to answer basic questions.

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Meets	Students who Meet the alternate standard frequently:
For students taking the Extended Assessment scores at this level indicate an understanding of the academic concepts linked to the state's grade level content standards for Reading. Students demonstrate an understanding that meaning can be extracted from text, and are frequently able to extract meaning from text. Students demonstrate an understanding of the interaction between a reader and text.	 Demonstrate relatively consistent skill in decoding and recognizing words
	 Read some words in a reduced complexity connected text as measured by the assessment
	 Demonstrate limited dictionary use via identification of formatted text
	 Identify the meaning of the most familiar everyday words with support from contextual clues
	 Demonstrate some limited use of contextual clues to generally comprehend informational and literary text that is read to them
	 Interpret directions and procedures from informational text, and can sometimes extract a main idea
	 Use explicit information provided in text to determine cause and effect
	 Demonstrate some understanding of literary text through listening comprehension
	• Demonstrate some limited use of information found in simplified text to interpret diagrams, charts, and graphs to answer basic questions

Third Grade Reading (continued)

Third Grade Reading (continued)

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Nearly Meets For students taking the Extended Assessment scores at this level indicate an inconsistent and unpredictable understanding of the academic concepts linked to the state's grade level content standards for Reading. Students demonstrate limited or unpredictable comprehension.	 Students who Nearly Meet the alternate standard have unpredictable, or fragmented skills that are not reflective of a third grade achievement level. These students may infrequently or inconsistently: Demonstrate skills decoding and recognizing words Read basic words in reduced complexity connected text Identify meaning of everyday words with support from contextual clues. These students may identify familiar or repeated words Interpret simple directions and procedures from informational text Demonstrate limited understanding of literary text through listening comprehension
Does Not Yet Meet For students taking the Extended Assessment scores at this level indicate that the student does not yet have an understanding of the academic concepts as presented by the assessment (and as linked to the state's grade level content standards for Reading). The student demonstrates an extremely limited comprehension of reduced complexity text. These students unreliably interact with text and are unable to demonstrate the knowledge they have derived from the presented text.	Students who Do Not Yet Meet the alternate standard are unable to be successful at the content prompts in the tasks.
Fourth Grade Reading

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Exceeds For students taking the Extended Assessment scores at this level indicate a consistent understanding of the academic concepts linked to the state's grade level content standards for Reading. Students demonstrate a consistent comprehension of reduced complexity text. Students consistently demonstrate an understanding that meaning is contained in text, and demonstrate a consistent and reliable method of extracting meaning from text. Students demonstrate a working understanding of the interaction between a reader and text.	 Students who Exceed the alternate standard consistently and predictably: Demonstrate skills in decoding and recognizing words Read a variety of words in a connected text Demonstrate understanding of dictionary use via identification of formatted text Provide or identify meaning of grade-level everyday words either with or without contextual clues Use context and inference to comprehend informational and literary text that is read to them Interpret directions and procedures from informational text, recognize structural features, and extract main ideas and details Use context and inference from informational text to determine cause and effect Demonstrate understanding of simple literary text through listening comprehension Demonstrate an ability to use information found in simplified text to interpret diagrams, charts, and graphs to answer basic questions

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Meets	Students who Meet the alternate standard frequently:
For students taking the Extended Assessment scores at this level indicate an understanding of the academic concepts linked to the state's grade level content standards for Reading. Students demonstrate a relatively consistent comprehension of reduced complexity text an understanding that meaning can be extracted from text, and are frequently able to extract meaning from text. Students demonstrate an understanding of the interaction between a reader and text.	 Demonstrate relatively consistent skills in decoding and recognizing words
	Read some critical words in a connected text
	Demonstrate some limited understanding of dictionary use via identification of formatted text
	 Provide or identify meaning of some everyday words with support from contextual clues
	 Use contextual clues to comprehend informational and simple literary text that is read to them
	• Demonstrate some limited skills in Interpreting some directions and procedures from informational text, or are able to generally recognize the structural features of text
	Demonstrate some limited use of context and inference from informational text to determine cause and effect
	Demonstrate some understanding of literary text through listening comprehension
	 Demonstrate some limited ability to use information found in simplified text to interpret diagrams, charts, and graphs to answer basic questions

Fourth Grade Reading (continued)

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Nearly Meets For students taking the Extended Assessment scores at this level indicate an inconsistent or unpredictable understanding of the academic concepts linked to the state's grade level content standards for Reading. Students demonstrate limited or unpredictable, (not repeatable) comprehension of reduced complexity text.	 Students who Nearly Meet the alternate standard have unpredictable, or fragmented skills that are not reflective of a fourth grade achievement level. These students may infrequently or inconsistently: Demonstrate some skills in decoding and recognizing words Read basic words in a connected text Identify meaning of any everyday words with support from contextual clues Demonstrate some limited use of contextual clues to comprehend informational and literary text Interpret simple directions from informational text, or recognize the structural features of text Demonstrate some limited understanding of literary text through listening comprehension
Does Not Yet Meet For students taking the Extended Assessment scores at this level indicate that the student does not yet have a reliable understanding of the academic concepts as presented by the assessment (and as linked to the state's grade level content standards for Reading). The student demonstrates extremely limited comprehension of reduced complexity text These students unreliably interact with text and are unable to demonstrate the knowledge they have derived from the text.	Students who Do Not Yet Meet the alternate standard are unable to be successful at the content prompts in the tasks.

Fourth Grade Reading (continued)

Fifth Grade Reading

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Exceeds For students taking the Extended Assessment scores at this level indicate a consistent understanding of the academic concepts linked to the state's grade level content standards for Reading. Students demonstrate a consistent comprehension of reduced complexity text. Students consistently demonstrate their understanding that meaning is contained in text, and utilize a consistent and reliable method of extracting meaning from text. Students demonstrate consistent understanding of the interaction between a reader and text.	 Students who Exceed the alternate standard consistently and predictably: Demonstrate strong skills in decoding and recognizing words Read a clear majority of words in a connected text as measured by the assessment Demonstrate meaningful understanding of dictionary use via identification of formatted text Provide or identify meaning of a clear majority of everyday words either with or without contextual clues Use context and inference to comprehend informational and literary text that is read to them Interpret directions and procedures from informational text, recognize structural features, and are able to extract main ideas and details Use context and inference from informational text to determine cause and effect Demonstrate both a general and a specific understanding of literary text through listening comprehension Demonstrate an ability to use information found in simplified text to interpret diagrams, charts, and graphs to answer basic questions

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Meets	Students who Meet the alternate standard frequently:
Meets For students taking the Extended Assessment, scores at this level indicate an understanding of the academic concepts linked to the state's grade level content standards for Reading. Students demonstrate a relatively consistent comprehension of reduced complexity text an understanding that meaning can be extracted from text, and are frequently able to extract meaning from text. Students demonstrate a consistent understanding of the interaction between a reader and text.	 Students who Meet the alternate standard frequently: Demonstrate skills in decoding and recognizing words Read the words in a connected text Demonstrate a working understanding of dictionary use via identification of formatted text Provide or identify meaning of some everyday words with support from contextual clues or inference Use contextual clues to comprehend informational and literary text that is read to them Interpret some directions and procedures from informational text, or recognize the structural features of text with some specific references Use context and inference from informational text to determine cause and effect Demonstrate some general understanding of literary text through listening comprehension Demonstrate an ability to use information found in simplified text to interpret diagrams, charts, and graphs to answer basic questions

Fifth Grade Reading (continued)

Fifth Grade Reading (continued)

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Nearly Meets For students taking the Extended Assessment, scores at this level indicate an inconsistent or unpredictable grasp of the academic concepts linked to the state's grade level content standards for Reading. Students demonstrate limited or unpredictable (not repeatable) comprehension of reduced complexity text.	 Students who Nearly Meet the alternate standard have unpredictable, or fragmented skills that are not reflective of a fifth grade achievement level. These students may infrequently or inconsistently: Demonstrate some skills in decoding and recognizing words Read some words from a connected text Demonstrate limited understanding of dictionary use via identification of formatted text Identify meaning of everyday words with support from contextual clues Use contextual clues to comprehend informational and literary text Use context from informational text to determine cause and effect Demonstrate general understanding of literary text through listening comprehension Demonstrate a limited ability to use information found in simplified text to interpret diagrams, charts, and graphs to answer basic questions
Does Not Yet Meet For students taking the Extended Assessment, scores at this level indicate that the student does not yet have a reliable understanding of the academic concepts as presented by the assessment (and as linked to the state's grade level content standards for Reading). The student demonstrates extremely limited comprehension of reduced complexity text. These students unreliably interact with text and are unable to demonstrate the knowledge they have derived from the text.	Students who Do Not Yet Meet the alternate standard are unable to be successful at the content prompts in the tasks.

Sixth Grade Reading

Alternate Achievement Level Descriptor (Specific)
Students who Exceed the alternate standard consistently:
 Students who Exceed the alternate standard consistently: Interpret meaning from the context and structure in written text Obtain meaning from text in order to perform a task as measured by the assessment Demonstrate understanding of the use of tables and charts Make inferences from written text with the help of contextual clues Explain and summarize information using written text Explain and predict information using written text Compare and contrast similar pieces of text predictably in a general or global manner
 Can show basic understanding of cause and effect from written text
 Demonstrate a general/basic understanding of the facts and opinions presented in written text
 Use information found in simplified text to identify basic themes presented in written text

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Meets For students taking the Extended Assessment, scores at this level indicate an understanding of the academic concepts linked to the state's sixth grade level content standards for Reading. Students demonstrate a relatively consistent comprehension of reduced complexity text, and are frequently able to extract accurate meaning from text. Students who meet the standard demonstrate an understanding of the interaction between a reader and text by completing tasks on demand.	 Students who Meet the alternate standard frequently, (but inconsistently): Interpret meaning from the context and structure in written text Obtain meaning from text in order to perform a task as measured by the assessment Demonstrate understanding of the use of tables and charts Make inferences from written text with the help of contextual clues Explain and summarize information using written text Explain and predict information using written text Compare and contrast similar pieces of text predictably in a general or global manner Can show basic understanding of cause and effect presented in written text Demonstrate a general/basic understanding of the facts and opinions presented in written text

Sixth Grade Reading (continued)

Sixth Grade Reading (continued)

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Nearly Meets For students taking the Extended Assessment, scores at this level indicate a limited and unpredictable understanding of the academic concepts linked to the state's sixth grade level content standards for Reading. Students demonstrate limited or unpredictable (i.e. not repeatable) comprehension of reduced complexity text. These students have not demonstrated an understanding that meaning can be extracted from text extract meaning from text in a manner that does not appear to be greater than chance.	 Students who Nearly Meet the alternate standard have unpredictable, or splintered skills that are not reflective of a sixth grade achievement level. These students may infrequently or inconsistently: Interpret meaning from the context and structure in written text Obtain meaning from text in order to perform a task as measured by the assessment Demonstrate understanding of the use of tables and charts Make inferences from written text with the help of contextual clues Explain and summarize information using written text Compare and contrast similar pieces of text predictably in a general or global manner Can show basic understanding of cause and effect presented in written text Demonstrate a general/basic understanding of the facts and opinions presented in written text
Does Not Yet Meet For students taking the Extended Assessment, scores at this level indicate that the student does not yet have a reliable understanding of the academic concepts linked to the state's sixth grade level content standards for Reading. The student demonstrates no (or extremely limited) comprehension of reduced complexity text. These students unreliably interact with text and are unable to demonstrate the knowledge they have derived from text.	Students who Do Not Yet Meet the alternate standard are unable to be successful at the content prompts in the tasks.

Seventh Grade Reading

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Alternate Achievement Level (General) Exceeds For students taking the Extended Assessment, scores at this level indicate a strong consistent understanding of the academic concepts linked to the state's grade level content standards for Reading. Students demonstrate a consistent comprehension of both overt and implicit information presented in reduced complexity text. Students consistently demonstrate skills associated with determining meaning from text. Students demonstrate an applied understanding of the interaction between a reader and text.	 Alternate Achievement Level Descriptor (Specific) Students who Exceed the alternate standard consistently and predictably: Interpret meaning from the context and structure in written text Obtain meaning from text in order to perform a task as measured by the assessment Demonstrate understanding of the use of tables and charts Make inferences from written text with the help of contextual clues Explain and summarize information using written text Compare and contrast similar pieces of text predictably in a general or global manner Can show basic understanding of cause and effect presented in written text
	Demonstrate a general/basic understanding of the facts and opinions presented in written text
	 the facts and opinions presented in written text Use information found in text to identify basic
	themes presented in written text

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Meets	Students who Meet the alternate standard frequently:
For students taking the Extended Assessment, scores at this level indicate an identifiable understanding of the academic concepts linked to the state's seventh grade level content standards for Reading. Students demonstrate a relatively consistent comprehension of reduced complexity text and are frequently able to extract meaning from text. Students who meet the standard demonstrate an understanding of the interaction between a reader and text by completing tasks on demand.	Interpret meaning from the context and structure in written text
	Obtain meaning from text in order to perform a task as measured by the assessment
	 Demonstrate understanding of the use of tables and charts
	 Make inferences from presented text with the help of contextual clues
	 Explain and summarize information using presented text
	Explain and predict information using presented text
	 Compare and contrast similar pieces of text predictably in a general or global manner
	 Can show basic understanding of cause and effect presented in written text
	 Demonstrate a general/basic understanding of the facts and opinions presented in written text
	• Use information found in simplified text to identify basic themes presented in written text

Seventh Grade Reading (continued)

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Nearly Meets For students taking the Extended Assessment, scores at this level indicate an inconsistent or unpredictable	Students who Nearly Meet the alternate standard have unpredictable, or splintered skills that are not reflective of a seventh grade achievement level but may infrequently or inconsistently:
concepts linked to the state's seventh grade level content standards for	Structure in written text Obtain meaning from text in order to perform a
Reading. Students demonstrate limited or unpredictable (i.e. not repeatable)	task as measured by the assessment
comprehension of reduced complexity text. These students are infrequently able to extract meaning from text.	 Demonstrate understanding of the use of tables and charts
	Make inferences from written text with the help of contextual clues
	 Explain and summarize information using written text
	Explain and predict information using written text
	 Compare and contrast similar pieces of text predictably in a general or global manner
	 Can show basic understanding of cause and effect presented in written text
	 Demonstrate a general/basic understanding of the facts and opinions presented in written text
	Use information found in text to identify basic themes presented in written text
Does Not Yet Meet	Students who Do Not Yet Meet the alternate standard are
For students taking the Extended Assessment, scores at this level indicate that the student does not yet have a reliable understanding of the academic concepts as presented by the assessment and as linked to the state's seventh grade level content standards for Reading. The student demonstrates no (or extremely limited) comprehension of reduced complexity text. These students unreliably interact with text and are unable to demonstrate the knowledge they have derived from text.	unable to be successful at the content prompts in the tasks.

Seventh Grade Reading (continued)

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Exceeds For students taking the Extended Assessment, scores at this level indicate a thorough understanding of the academic concepts linked to the state's eighth grade level content standards for Reading. Students demonstrate a consistent comprehension of reduced complexity text. Students consistently demonstrate skills associated with determining meaning from text. Students demonstrate an applied understanding of the interaction between a reader and text.	 Students who Exceed the alternate standard consistently and predictably: Interprets meaning from the context and structure in written text Obtain meaning from text in order to perform a task as measured by the assessment Demonstrate understanding of the use of tables and charts Make inferences from written text with the help of contextual clues Explain and summarize information using written text Explain and predict information using presented text Compare and contrast similar pieces of text predictably in a general or global manner Can show basic understanding of cause and effect presented in written text Demonstrate a general/basic understanding of the facts and opinions presented in written text Use information found in simplified text to identify basic themes presented in written text

Eighth Grade Reading

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Meets	Students who Meet the alternate standard frequently:
For students taking the Extended Assessment, scores at this level indicate an identifiable understanding of the academic concepts linked to the state's eighth grade level content standards for Reading. Students demonstrate a relatively consistent comprehension of reduced complexity text, an understanding that meaning can be extracted from text, and are frequently able to extract meaning from text. Students who meet the standard demonstrate an understanding of the interaction between a reader and text by completing tasks on demand.	 Interpret meaning from the context and structure in written text
	Obtain meaning from text in order to perform a task as measured by the assessment
	 Demonstrate understanding of the use of tables and charts
	 Make inferences from written text with the help of contextual clues
	 Explain and summarize information using presented text
	 Explain and predict information using presented text
	 Compare and contrast similar pieces of text predictably in a general or global manner
	 Can show basic understanding of cause and effect presented in written text
	 Demonstrate a general/basic understanding of the facts and opinions presented in written text
	• Use information found in simplified text to identify basic themes presented in written text

Eighth Grade Reading (continued)

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Nearly Meets For students taking the Extended Assessment, scores at this level indicate an inconsistent or unpredictable understanding of the academic concepts linked to the state's eighth grade level content standards for Reading. Students demonstrate limited or unpredictable (i.e. not repeatable) comprehension of reduced complexity text. These students have not demonstrated an understanding that meaning can be extracted from text, and extract meaning from text in a manner that does not appear to be greater than chance.	 Students who Nearly Meet the alternate standard have unpredictable, or splintered skills that are not reflective of a eighth grade achievement level but may infrequently or inconsistently: Interpret meaning from the context and structure in written text Obtain meaning from text in order to perform a task as measured by the assessment Demonstrate understanding of the use of tables and charts Make inferences from written text with the help of contextual clues Explain and summarize information using presented text Compare and contrast similar pieces of text predictably in a general or global manner Can show basic understanding of cause and effect presented in written text Demonstrate a general/basic understanding of the facts and opinions presented in written text
Does Not Yet Meet For students taking the Extended Assessment, scores at this level indicate that the student does not yet have a reliable understanding of the academic concepts as presented by the assessment (and as linked to the state's eighth grade level content standards for Reading). The student demonstrates no (or extremely limited) comprehension of reduced complexity text. These students unreliably interact with reduced complexity text and are unable to demonstrate the knowledge they have derived from text.	Students who Do Not Yet Meet the alternate standard are unable to be successful at the content prompts in the tasks.

Eighth Grade Reading (continued)

Tenth Grade Reading

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Exceeds For students taking the Extended Assessment, scores at this level indicate a strong understanding of the academic concepts linked to the state's tenth grade level content standards for Reading. Students demonstrate a consistent comprehension of reduced complexity text. Students consistently demonstrate skills associated with determining meaning from text. Students demonstrate an applied understanding of the interaction between a reader and text.	 Students who Exceed the alternate standard consistently and predictably: Interpret meaning from the context and structure in written text Obtain meaning from text in order to perform a task as measured by the assessment Demonstrate understanding of the use of tables and charts Make inferences from written text with the help of contextual clues Explain and summarize information using presented text Explain and predict information using presented text Compare and contrast similar pieces of text predictably in a general or global manner Can show basic understanding of cause and effect presented in written text Demonstrate a general/basic understanding of the facts and opinions presented in written text Use information found in simplified text to identify basic themes presented in written text

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Meets	Students who Meet the alternate standard frequently:
For students taking the Extended Assessment, scores at this level indicate an identifiable understanding of the academic concepts linked to the state's tenth grade level content standards for Reading. Students demonstrate a relatively consistent comprehension of reduced complexity text, an understanding that meaning can be extracted from text, and are frequently able to extract meaning from reduced complexity text. Students who meet the standard are able to demonstrate an understanding of the interaction between a reader and text by completing tasks on demand.	 Interpret meaning from the context and structure in written text
	Obtain meaning from text in order to perform a task as measured by the assessment
	 Demonstrate understanding of the use of tables and charts
	 Make inferences from presented text with the help of contextual clues
	 Explain and summarize information using presented text
	 Explain and predict information using presented text
	 Compare and contrast similar pieces of text predictably in a general or global manner
	 Can show basic understanding of cause and effect presented in written text
	 Demonstrate a general/basic understanding of the facts and opinions presented in written text
	• Use information found in simplified text to identify basic themes presented in written text

Tenth Grade Reading (continued)

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Nearly Meets For students taking the Extended Assessment, scores at this level indicate an inconsistent or unpredictable understanding of the academic concepts linked to the state's tenth grade level content standards for Reading. Students demonstrate limited or unpredictable (i.e. not repeatable) comprehension of reduced complexity text. These students have not demonstrated an understanding that meaning can be extracted from text and extract meaning from text in a manner that does not appear to be greater than chance.	Students who Nearly Meet the alternate standard have unpredictable, or splintered skills that are not reflective of a tenth grade achievement level but may infrequently or inconsistently: Interpret meaning from the context and structure in written text Obtain meaning from text in order to perform a task as measured by the assessment Demonstrate understanding of the use of tables and charts Make inferences from written text with the help of contextual clues Explain and summarize information using written text Compare and contrast similar pieces of text predictably in a general or global manner Can show basic understanding of cause and effect presented in written text
	 Use information found in simplified text to identify basic themes presented in written text
Does Not Yet Meet For students taking the Extended Assessment, scores at this level indicate that the student does not yet have a reliable understanding of the academic concepts as presented by the assessment (and as linked to the state's tenth grade level content standards for Reading). The student demonstrates no (or extremely limited) comprehension of reduced complexity text. These students unreliably interact with reduced text and are unable to demonstrate the knowledge they have derived from text.	Students who Do Not Yet Meet the alternate standard are unable to be successful at the content prompts in the tasks.

Tenth Grade Reading (continued)

Mathematics

Third Grade Mathematics

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Exceeds	Students who Exceed the alternate standard consistently:
For students taking the Extended Assessment, scores at this level indicate a thorough understanding of the academic concepts linked to the state's grade-level content standards for mathematics. Students demonstrate consistent comprehension of reduced complexity numeric concepts, a consistent understanding that numbers represent quantitative values, and demonstrate a consistent and reliable method of manipulating quantities to obtain a desired outcome. Students who exceed the third-grade mathematics standard demonstrate a thorough understanding of the interaction between number and value.	 Demonstrate a knowledge of numbers as quantitative entities with assigned values based on place Demonstrate simple calculations Are familiar with the concepts of time and temperature as numerical information that holds information that has a particular value that is unique from its integral value Demonstrate an understanding of the properties of shapes Demonstrate an understanding of measurement units, rules, and tools Interpret basic graphs and data representations, including mode Demonstrate an understanding of fractions, their use, and their meaning Demonstrate a understanding of fractions, their use, and their meaning Demonstrate a basic understanding of the use of probabilities and predictions in practical applications

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Meets	Students who Meet the alternate standard frequently, :
For students taking the Extended Assessment, scores at this level indicate an understanding of the academic concepts linked to the state's grade-level content standards for mathematics. Students demonstrate a comprehension of reduced complexity numeric concepts, an understanding that numbers represent quantitative values, and are frequently able to demonstrate a consistent method of manipulating quantities to obtain a desired outcome. Students who meet the third-grade mathematics standard demonstrate an understanding of the relationship between number and value.	 Demonstrate a knowledge of numbers as quantitative entities with assigned values based on place Demonstrate simple calculations
	• Are familiar with the concepts of time and temperature as numerical information that holds information that has a particular value that is unique from its integral value
	 Demonstrate an understanding of the properties of shapes
	 Demonstrate an understanding of measurement units, rules, and tools
	 Interpret basic graphs and data representations, including mode
	 Demonstrate skills surrounding the appropriate application of money
	 Demonstrate an understanding of fractions, their use, and their meaning
	 Demonstrate a basic understanding of the use of probabilities and predictions in practical applications
	Demonstrate a basic understanding of the algebraic concepts

Third Grade Mathematics (continued)

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Nearly Meets For students taking the Extended Assessment, scores at this level indicate an inconsistent understanding of the academic concepts linked to the state's grade- level content standards for mathematics. Students demonstrate an inconsistent comprehension of reduced-complexity numeric concepts. These students have not demonstrated a consistent understanding that numbers represent quantitative values, and are infrequently able to manipulate quantities to obtain a desired outcome.	 Students who Nearly Meet the alternate standard have unpredictable, or fragmented skills that are not reflective of a third-grade achievement level but may infrequently or inconsistently: Demonstrate a knowledge of numbers as quantitative entities with assigned values based on place Demonstrate simple calculations Are familiar with the concepts of time and temperature as numerical information that holds information that has a particular value that is unique from its integral value Demonstrate an understanding of the properties of shapes Demonstrate skills surrounding the appropriate application of money Demonstrate an understanding of fractions, their use, and their meaning Demonstrate a basic understanding of the use of probabilities and predictions in practical application Demonstrate a basic understanding of the application
Does Not Yet Meet For students taking the Extended Assessment, scores at this level indicate that the student does not yet have an understanding of the academic concepts linked to the state's grade-level content standards for mathematics. Students demonstrate a lack of comprehension of reduced complexity numeric concepts (i.e. numeric concepts that have been simplified, with reduced text and language where appropriate). These students inaccurately interact with numeric values and are unable to meaningfully manipulate values.	Students who Do Not Yet Meet the alternate standard are unable to be successful at the content prompts in the tasks.

Third Grade Mathematics (continued)

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Exceeds For students taking the Extended Assessment, scores at this level indicate a thorough understanding of the academic concepts linked to the state's grade-level content standards for mathematics. Students demonstrate a consistent comprehension of reduced complexity numeric concepts. Students consistently demonstrate an understanding that numbers represent quantitative values and demonstrate a consistent method of manipulating quantities in a variety of formats to obtain desired outcomes. Students who exceed the fourth-grade mathematics standard demonstrate a working understanding of the interaction between number and value.	 Students who Exceed the alternate standard consistently and predictably: Demonstrate a knowledge of numbers as quantitative entities with assigned values based on place Demonstrate simple calculations Are familiar with the concepts of time and temperature as numerical information that holds information that has a particular value that is unique from its integral value Demonstrate an understanding of the properties of shapes Demonstrate an understanding of measurement units, rules, and tools Interpret basic graphs and data representations, including mode Demonstrate an understanding of fractions, their use, and their meaning Demonstrate a basic understanding of the use of probabilities and predictions in practical application Demonstrate a basic understanding of the use of their use a basic understanding of the use of probabilities and predictions in practical application

Fourth Grade Mathematics

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Meets	Students who Meet the alternate standard frequently:
For students taking the Extended Assessment, scores at this level indicate an understanding of the academic concepts linked to the state's grade-level content standards for Mathematics. Students demonstrate a consistent comprehension of reduced complexity numeric concepts (i.e. numeric concepts that have been simplified, with reduced text and language where appropriate), ap	 Demonstrate a knowledge of numbers as quantitative entities with assigned values based on place Demonstrate simple calculations Are familiar with the concepts of time and temperature as numerical information that holds
	information that has a particular value that is unique from its integral value
understanding that numbers represent quantitative values and are frequently	 Demonstrate an understanding of the properties of shapes
able to demonstrate a consistent method of manipulating quantities to obtain a desired outcome. Students who meet the fourth-grade mathematics standard demonstrate an understanding of the relationship between number and value.	 Demonstrate an understanding of measurement units, rules, and tools
	 Interpret basic graphs and data representations, including mode
	Demonstrate skills surrounding the appropriate application of money
	• Demonstrate an understanding of fractions, their use, and their meaning
	 Demonstrate a basic understanding of the use of probabilities and predictions in practical application
	Demonstrate a basic understanding of the algebraic concepts

Fourth Grade Mathematics (continued)

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Nearly Meets For students taking the Extended Assessment, scores at this level indicate an inconsistent understanding of the academic concepts linked to the state's grade- level content standards for mathematics. Students demonstrate inconsistent or random (not repeatable) comprehension of reduced complexity numeric concepts (i.e. numeric concepts that have been simplified, with reduced text and language where appropriate). These students have not yet demonstrated a consistent understanding that numbers represent quantitative values and are infrequently able to manipulate quantities to obtain a desired outcome.	 Students who Nearly Meet the alternate standard have unpredictable, or fragmented skills that are not reflective of a fourth-grade achievement level but may infrequently or inconsistently: Demonstrate a knowledge of numbers as quantitative entities with assigned values based on place Demonstrate simple calculations Are familiar with the concepts of time and temperature as numerical information that holds information that has a particular value that is unique from its integral value Demonstrate an understanding of the properties of shapes Demonstrate an understanding of measurement units, rules, and tools Demonstrate skills surrounding the appropriate application of money Demonstrate an understanding of fractions, their use, and their meaning
	Demonstrate a basic understanding of the use of probabilities and predictions in practical application
	Demonstrate a basic understanding of the algebraic concepts
Does Not Yet Meet For students taking the Extended Assessment, scores at this level indicate that the student does not yet have an understanding of the academic concepts linked to the state's grade-level content standards for mathematics. The student demonstrates no (or limited) comprehension of reduced complexity numeric concepts (i.e. numeric concepts that have been simplified, with reduced text and language where appropriate). These students inaccurately interact with numeric values and are unable to meaningfully manipulate values	Students who Do Not Yet Meet the alternate standard are unable to be successful at the content prompts in the tasks.

Fourth Grade Mathematics (continued)

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Exceeds For students taking the Extended Assessment, scores at this level indicate a thorough understanding of the academic concepts linked to the state's grade-level content standards for mathematics. Students demonstrate a consistent comprehension of reduced complexity numeric concepts (i.e. numeric concepts that have been simplified, with reduced text and language where appropriate).Students consistently demonstrate an understanding that numbers represent quantitative values and demonstrate a consistent method of manipulating quantities in a variety of formats to obtain desired outcomes. Students who exceed the fifth-grade mathematics standard demonstrate a thorough understanding of the interaction between number and value.	 Students who Exceed the alternate standard consistently and predictably: Demonstrate a knowledge of numbers as quantitative entities with assigned values based on place Demonstrate simple calculations Are familiar with the concepts of time and temperature as numerical information that holds information that has a particular value that is unique from its integral value Demonstrate an understanding of the properties of shapes Demonstrate an understanding of measurement units, rules, and tools Interpret basic graphs and data representations, including mode Demonstrate an understanding of fractions, their use, and their meaning Demonstrate a basic understanding of the use of probabilities and predictions in practical application Demonstrate a basic understanding of the algebraic concepts

Fifth Grade Mathematics

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Meets	Students who Meet the alternate standard frequently:
For students taking the Extended Assessment, scores at this level indicate an understanding of the academic concepts linked to the state's grade-level content standards for mathematics. Students demonstrate a consistent comprehension of reduced complexity numeric concepts (i.e. numeric concepts that have been simplified, with reduced text and language where appropriate), an understanding that numbers represent quantitative values, and are frequently able to demonstrate a consistent method of manipulating quantities to obtain a desired outcome. Students who meet the fifth-grade mathematics standard demonstrate an understanding of the relationship between number and value.	 Demonstrate a knowledge of numbers as quantitative entities with assigned value based on place Demonstrate simple calculations Are familiar with the concepts of time and temperature as numerical information that holds information that has a particular value that is unique from its integral value Demonstrate an understanding of the properties of shapes Demonstrate an understanding of measurement units, rules, and tools Interpret basic graphs and data representations, including mode Demonstrate an understanding of fractions, their use, and their meaning Demonstrate a basic understanding of the use of probabilities and predictions in practical application Demonstrate a basic understanding of the use of probabilities and predictions in practical application

Fifth Grade Mathematics (continued)

Fifth Grade Mathematics

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)	
Nearly Meets For students taking the Extended Assessment, scores at this level indicate an inconsistent	Students who Nearly Meet the alternate standard have unpredictable, or fragmented skills that are not reflective of a fifth- grade achievement level but may infrequently or inconsistently:	
concepts linked to the state's grade- level content standards for	 Demonstrate a knowledge of numbers as quantitative entities with assigned value based on place 	
mathematics. Students demonstrate	Demonstrate simple calculations	
inconsistent or random comprehension of reduced complexity numeric concepts. These students have not yet demonstrated a consistent understanding that	• Are familiar with the concepts of time and temperature as numerical information that holds information that has a particular value that is unique from its integral value	
numbers represent quantitative values and are infrequently able to	 Demonstrate an understanding of the properties of shapes 	
manipulate quantities to obtain a desired outcome.	 Demonstrate an understanding of measurement units, rules, and tools 	
	 Interpret basic graphs and data representations, including mode 	
	 Demonstrate skills surrounding the appropriate application of money 	
	 Demonstrate an understanding of fractions, their use, and their meaning 	
	Demonstrate a basic understanding of the use of probabilities and predictions in practical application	
	 Demonstrate a basic understanding of the algebraic concepts 	
Does Not Yet Meet	Students who Do Not Yet Meet the alternate standard are unable	
For students taking the Extended Assessment, scores at this level indicate that the student does not yet have an understanding of the academic concepts linked to the state's grade-level content standards for Mathematics. The student demonstrates no (or limited) comprehension of reduced complexity numeric concepts. These students inaccurately interact with numeric values and are unable to meaningfully manipulate values.		

Sixth Grade Mathematics

Exceeds Students who Exceed the alternate standard consistently: For students taking the Extended • Demonstrate a knowledge of whole numbers and fractions as quantitative entities with assigned values based on place and consistent application of the • Demonstrate computations and calculations using the standard consistent using the standard constandard constandard consistent using the standard consi	Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
 For students taking the Extended Demonstrate a knowledge of whole numbers an fractions as quantitative entities with assigned values based on place Demonstrate computations and calculations using the fractions are calculations are calculations. 	Exceeds	Students who Exceed the alternate standard consistently:
 academic concepts linked to the state's grade-level content standards for mathematics when given problems of reduced complexity. The student demonstrates both (1) a consistent understanding that numbers represent quantitative values and (2) a consistent and reliable use of mathematical operations to obtain desired outcomes. Students who exceed the sixth-grade mathematics standard are able to demonstrate an applied understanding of the interaction between number and value. Are familiar with the concepts of fractions Demonstrate a general understanding of statistical measures and probabilities Demonstrate an understanding of probability and the patterns associated with algebraic concepts Demonstrate an understanding of algebra with respect to the use of variables the manipulation of equations and the recognition of relationships Demonstrate an understanding of measurement its use and meaning Demonstrate a basic understanding of geometriproperties including transformation and symmetry Demonstrate a basic understanding of the geometric properties associated with graphing and modeling 	Exceeds For students taking the Extended Assessment, scores at this level indicate a thorough understanding and consistent application of the academic concepts linked to the state's grade-level content standards for mathematics when given problems of reduced complexity. The student demonstrates both (1) a consistent understanding that numbers represent quantitative values and (2) a consistent and reliable use of mathematical operations to obtain desired outcomes. Students who exceed the sixth-grade mathematics standard are able to demonstrate an applied understanding of the interaction between number and value.	 Students who Exceed the alternate standard consistently: Demonstrate a knowledge of whole numbers and fractions as quantitative entities with assigned values based on place Demonstrate computations and calculations using prime numbers, general problem solving strategies Are familiar with the concepts of fractions Demonstrate a general understanding of statistical measures and probabilities Demonstrate an understanding of probability and the patterns associated with algebraic concepts Demonstrate an understanding of algebra with respect to the use of variables the manipulation of equations and the recognition of relationships Demonstrate an understanding of measurement, its use and meaning Demonstrate a basic understanding of geometric properties including transformation and symmetry Demonstrate a basic understanding of the geometric properties associated with graphing and modeling

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Meets For students taking the Extended Assessment, scores at this level indicate an ability to understand and apply academic concepts linked to the state's grade level content standards for Mathematics. Students demonstrate a consistent comprehension of number concepts. The student demonstrates both (1) an understanding that numbers represent quantitative values and (2) reliable use of mathematical operations to manipulate quantities. Students who meet the sixth-grade mathematics standard demonstrate an understanding of the relationship between number and value.	 Students who Meet the alternate standard frequently, (but inconsistently): Demonstrate a knowledge of whole numbers and fractions as quantitative entities with assigned values based on place Demonstrate computations and calculations using prime numbers and general problem solving strategies Are familiar with the concepts of fractions Demonstrate a general understanding of statistical measures and probabilities Demonstrate an understanding of probability and the patterns associated with algebraic concepts Demonstrate an understanding of algebra with respect to the use of variables, the manipulation of equations, and the recognition of relationships Demonstrate an understanding of measurement, its use and meaning Demonstrate a basic understanding of geometric properties including transformation and symmetry Demonstrate a basic understanding of the geometric properties associated with graphing and modeling

Sixth Grade Mathematics (continued)

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)	
Nearly Meets For students taking the Extended Assessment, scores at this level indicate an inconsistent or fragmented grasp of academic concepts linked to the state's grade- level content standards for mathematics. These students' scores demonstrate progress toward, but not mastery of concepts including (1) understanding that numbers represent quantitative values and (2) the use of mathematical operations to obtain a desired outcome.	 Students who Nearly Meet the alternate standard have unpredictable, or fragmented skills that are not reflective of a sixth-grade achievement level but may infrequently or inconsistently: Demonstrate a knowledge of whole numbers and fractions as quantitative entities with assigned value based on place Demonstrate computations and calculations using prime numbers, general problem solving strategies Are familiar with the concepts of fractions Demonstrate a general understanding of statistical measures and probabilities Demonstrate an understanding of probability and the patterns associated with algebraic concepts Demonstrate an understanding of algebra with respect to the use of variables, the manipulation of equations, and the recognition of relationships Demonstrate an understanding of measurement, its use and meaning Demonstrate a basic understanding of geometric properties including transformation and symmetry Demonstrate a basic understanding of the geometric properties associated with graphing and modeling 	
Does Not Yet Meet	Students who Do Not Yet Meet the alternate standard are unable	
For students taking the Extended Assessment, scores at this level indicate that the student does not yet have a reliable grasp of the state's grade-level content standards for mathematics. These students demonstrate a noticeable lack of comprehension of numeric concepts and an extremely limited ability to manipulate and or interact with numeric values.	to be successful at the content prompts in the tasks.	

Sixth Grade Mathematics (continued)

Seventh Grade Mathematics

Alternate Achievement Level A (General)	Alternate Achievement Level Descriptor (Specific)
Exceeds S For students taking the Extended Assessment, scores at this level indicate a thorough understanding and consistent application of the academic concepts linked to the state's grade-level content standards for mathematics when given problems of reduced complexity. The student demonstrates (1) a consistent understanding that numbers represent quantitative values, (2) an understanding that mathematics can be used to solve problems, and (3) a consistent and reliable use of mathematical operations to obtain desired outcomes. Students who exceed the seventh-grade mathematics standard are able to demonstrate an applied understanding of the interaction between number and value.	 Students who Exceed the alternate standard consistently and predictably: Demonstrate a knowledge of whole numbers and fractions as quantitative entities with assigned values based on place Demonstrate computations and calculations using prime numbers and general problem solving strategies Are familiar with the concepts of fractions Demonstrate a general understanding of statistical measures and probabilities Demonstrate an understanding of probability and the patterns associated with algebraic concepts Demonstrate an understanding of algebra with respect to the use of variables the manipulation of equations and the recognition of relationships Demonstrate an understanding of measurement, its use, and meaning Demonstrate a basic understanding of geometric properties including transformation and symmetry Demonstrate a basic understanding of the geometric properties associated with graphing and modeling

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)	
Meets	Students who Meet the alternate standard frequently,):	
Meets For students taking the Extended Assessment, scores at this level indicate an ability to understand and apply academic concepts linked to the state's grade-level content standards for mathematics. Students demonstrate (1) an understanding that numbers represent quantitative values, (2) knowledge that mathematics can be used to answer questions beyond basic calculation and (3) a reliable use of mathematical operations to manipulate quantities. Students who meet the seventh grade mathematics standard demonstrate an understanding of the relationship between number and value.	 Students who Meet the alternate standard frequently,): Demonstrate a knowledge of whole numbers and fractions as quantitative entities with assigned values based on place Demonstrate computations and calculations using prime numbers and general problem solving strategies Are familiar with the concepts of fractions Demonstrate a general understanding of statistical measures and probabilities Demonstrate an understanding of probability and the patterns associated with algebraic concepts Demonstrate an understanding of algebra with respect to the use of variables the manipulation of equations and the recognition of relationships Demonstrate an understanding of measurement, its use and meaning Demonstrate an understanding of geometric properties including transformation and symmetry 	
	Demonstrate a basic understanding of the geometric properties associated with graphing and modeling	

Seventh Grade Mathematics (continued)

understanding that numbers

Does Not Yet Meet

For students taking the Extended Assessment, scores at this level indicate that the student does not yet have a reliable grasp of the state's grade-level content standards for mathematics. These students demonstrate a noticeable lack of comprehension of numeric concepts and an extremely limited ability to manipulate and or interact with numeric values.

represent quantitative values and (2)

the use of mathematical operations to obtain a desired outcome.

Demonstrate a general understanding of

Demonstrate an understanding of probability and

Demonstrate skills surrounding the use of algebra

Demonstrate an understanding of measurement,

Demonstrate a basic understanding of geometric

Demonstrate a basic understanding of the

Demonstrate an understanding of algebra with

statistical measures and probabilities

with respect to graphing

its use and meaning

modeling

the patterns associated with algebraic concepts

respect to the use of variables the manipulation of equations and the recognition of relationships

properties including transformation and symmetry

geometric properties associated with graphing and

Students who **Do Not Yet Meet** the alternate standard are unable

to be successful at the content prompts in the tasks.

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Nearly Meets	Students who Nearly Meet the alternate standard have
For students taking the Extended Assessment, scores at this level indicate an inconsistent or fragmented grasp of academic concepts linked to the state's grade- level content standards for	seventh grade achievement level but may infrequently or inconsistently:
	• Demonstrate a knowledge of whole numbers and fractions as quantitative entities with assigned values based on place
mathematics. These students' scores demonstrate progress toward, though not mastery of	Demonstrate computations and calculations using prime numbers, general problem solving strategies
concepts including (1)	Are familiar with the concepts of fractions

Seventh Grade Mathematics (continued)

Eighth	Grade	Mathematics
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Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Exceeds For students taking the Extended Assessment, scores at this level indicate a thorough understanding and consistent application of the academic concepts linked to the	Students who Exceed the alternate standard consistently and predictably:
	 Demonstrate a knowledge of whole numbers and fractions as quantitative entities with assigned values based on place
standards for mathematics when given problems of reduced	Demonstrate computations and calculations using prime numbers and general problem solving strategies
complexity. The student demonstrates (1) a consistent	Are familiar with the concepts of fractions
understanding that numbers represent quantitative values, (2) an understanding that mathematics can be used to solve problems, and (3) a consistent and reliable use of mathematical operations to obtain desired outcomes. Students who exceed the eighth-grade mathematics standard are able to consistently demonstrate an applied understanding of the interaction between number and value.	 Demonstrate a general understanding of statistical measures and probabilities
	 Demonstrate an understanding of probability and the patterns associated with algebraic concepts
	 Demonstrate an understanding of algebra with respect to the use of variables the manipulation of equations and the recognition of relationships
	Demonstrate skills surrounding the use of algebra with respect to graphing
	 Demonstrate an understanding of measurement, its use and meaning
	Demonstrate a basic understanding of geometric properties including transformations and symmetry
	 Demonstrate a basic understanding of the geometric properties associated with graphing and modeling

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Meets For students taking the Extended Assessment, scores at this level indicate an ability to understand and apply academic concepts linked to the state's grade-level content standards for mathematics. Students demonstrate (1) an understanding that numbers represent quantitative values, (2) knowledge that mathematics can be used to answer questions beyond basic calculation, and (3) a reliable use of mathematical operations to manipulate quantities. Students who meet the eighth-grade mathematics standard demonstrate an understanding of the relationship between number and value.	 Students who Meet the alternate standard frequently, (but inconsistently): Demonstrate a knowledge of whole numbers and fractions as quantitative entities with assigned values based on place Demonstrate computations and calculations using prime numbers and general problem solving strategies Are familiar with the concepts of fractions Demonstrate a general understanding of statistical measures and probabilities Demonstrate an understanding of probability and the patterns associated with algebraic concepts Demonstrate an understanding of algebra with respect to the use of variables the manipulation of equations and the recognition of relationships Demonstrate an understanding of measurement, its use and meaning Demonstrate a basic understanding of geometric properties including transformations and symmetry Demonstrate a basic understanding of the geometric properties associated with graphing and modeling

Eighth Grade Mathematics (continued)

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Nearly Meets For students taking the Extended Assessment, scores at this level indicate an inconsistent or fragmented grasp of academic concepts linked to the state's grade- level content standards for mathematics. These students' scores demonstrate progress toward, though not mastery of basic concepts associated with (1) understanding that numbers represent quantitative values and (2) the use of mathematical operations to obtain a desired outcome.	Students who Nearly Meet the alternate standard have unpredictable, or fragmented skills that are not reflective of a eighth grade achievement level but may infrequently or inconsistently: • Demonstrate a knowledge of whole numbers and fractions as quantitative antition with assigned values
	Demonstrate computations and calculations using prime numbers and general problem solving strategies
	Are familiar with the concepts of fractions
	 Demonstrate a general understanding of statistical measures and probabilities
	 Demonstrate an understanding of probability and the patterns associated with algebraic concepts
	 Demonstrate an understanding of algebra with respect to the use of variables the manipulation of equations and the recognition of relationships
	 Demonstrate skills surrounding the use of algebra with respect to graphing
	 Demonstrate an understanding of measurement, its use and meaning
	 Demonstrate a basic understanding of geometric properties including transformations and symmetry
	 Demonstrate a basic understanding of the geometric properties associated with graphing and modeling
Does Not Yet Meet	Students who Do Not Yet Meet the alternate standard are unable
For students taking the Extended Assessment, scores at this level indicate that the student does not yet have a reliable grasp of the state's grade-level content standards for mathematics. These students demonstrate a noticeable lack of comprehension of numeric concepts and an extremely limited ability to manipulate and or interact with numeric values.	to be successful at the content prompts in the tasks.

Eighth Grade Mathematics (continued)
Tenth Grade Mathematics

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)		
Exceeds For students taking the Extended Assessment, scores at this level indicate a thorough understanding and consistent application of the academic concepts linked to the atatica grade level content	Students who Exceed the alternate standard consistently and predictably:		
	 Demonstrate a knowledge of whole numbers and fractions as quantitative entities with assigned values based on place 		
standards for mathematics when given problems of reduced	 Demonstrate computations and calculations using prime numbers and general problem solving strategies 		
complexity. The student demonstrates (1) a consistent	Are familiar with the concepts of fractions		
understanding that numbers represent quantitative values, (2) an understanding that mathematics can be used to solve problems, and (3) a consistent and reliable use of mathematical operations to obtain a desired outcome. Students who exceed the tenth-grade mathematics standard are able to consistently demonstrate an applied understanding of the interaction between number and value, including problem solving.	 Demonstrate a general understanding of statistical measures and probabilities 		
	 Demonstrate an understanding of probability and the patterns associated with algebraic concepts 		
	 Demonstrate an understanding of algebra with respect to the use of variables the manipulation of equations and the recognition of relationships 		
	 Demonstrate skills surrounding the use of algebra with respect to graphing 		
	 Demonstrate an understanding of measurement, its use and meaning 		
	Demonstrate a basic understanding of geometric properties including transformations and symmetry		
	 Demonstrate a basic understanding of the geometric properties associated with graphing and modeling 		

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Meets For students taking the Extended Assessment, scores at this level indicate an ability to understand and apply academic concepts linked to the state's grade-level content standards for mathematics. Students demonstrate (1) an understanding that numbers represent quantitative values, (2) knowledge that mathematics can be used to answer questions beyond basic calculation, and (3) a reliable use of mathematical operations to manipulate quantities. Students who meet the tenth-grade mathematics standard demonstrate an understanding of the relationship between number and value.	 Students who Meet the alternate standard frequently, (but inconsistently): Demonstrate a knowledge of whole numbers and fractions as quantitative entities with assigned values based on place Demonstrate computations and calculations using prime numbers and general problem solving strategies Are familiar with the concepts of fractions Demonstrate a general understanding of statistical measures and probabilities Demonstrate an understanding of probability and the patterns associated with algebraic concepts Demonstrate an understanding of algebra with respect to the use of variables the manipulation of equations and the recognition of relationships Demonstrate an understanding of measurement, its use and meaning Demonstrate a basic understanding of geometric properties including transformation and symmetry Demonstrate a basic understanding of the geometric properties associated with graphing and modeling

Tenth Grade Mathematics (continued)

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)		
Nearly Meets For students taking the Extended Assessment, scores at this level indicate an inconsistent or fragmented grasp of academic concepts linked to the state's grade- level content standards for mathematics. These students' scores demonstrate progress toward, though not mastery of basic concepts associated with (1) understanding that numbers represent quantitative values and (2) the use of mathematical operations to obtain a desired outcome, including through problem-solving.	 Students who Nearly Meet the alternate standard have unpredictable, or fragmented skills that are not reflective of a tenth-grade achievement level but may infrequently or inconsistently: Demonstrate a knowledge of whole numbers and fractions as quantitative entities with assigned values based on place Demonstrate computations and calculations using prime numbers, general problem solving strategies Are familiar with the concepts of fractions Demonstrate a general understanding of statistical measures and probabilities Demonstrate an understanding of probability and the patterns associated with algebraic concepts Demonstrate skills surrounding the use of algebra with respect to graphing Demonstrate an understanding of measurement, its use and meaning Demonstrate a basic understanding of geometric properties including transformations and symmetry Demonstrate a basic understanding of the 		
	modeling		
For students taking the Extended Assessment, scores at this level indicate that the student does not yet have a reliable grasp of the state's grade-level content standards for mathematics. These students demonstrate a noticeable lack of comprehension of numeric concepts and an extremely limited ability to manipulate and or interact with numeric values.	to be successful at the content prompts in the tasks.		

Tenth Grade Mathematics (continued)

Science

Science Benchmark 2 (Fifth Grade)

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)		
Alternate Achievement Level (General) Exceeds For students taking the Extended Assessment, scores at this level indicate a strong understanding of the academic concepts linked to the state's Benchmark 2 content standards for Science. Students demonstrate a consistent recognition of the basic relationships evident in the natural world. Students consistently demonstrate an understanding of properties of matter, force and energy, and the basic structures, functions and interactions of living organisms in the environment.	 Alternate Achievement Level Descriptor (Specific) Students who Exceed the alternate standard consistently and predictably: Recognize the unique properties and structure of matter (for example: solids, liquids, or gas) Recognize and predict the component stages of physical change in everyday objects and matter Recognize the properties associated with force and motion (including gravity) Recognize the interaction between energy and matter such as the transmission of electricity and sound Recognize the characteristics of various organisms and the associated needs and behaviors associated with organisms Recognize the relatedness of organisms in the environment and the impact of one organism on another Recognize the structures and physical developments in organisms that relate to survival and function Recognize the potential uses and functions of Earth's materials Recognize the characteristics and sequence of various seasons and associated weather 		
	 Understand the basic characteristics of planets and features of the solar system 		

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)	
Meets	Students who Meet the alternate standard frequently,	
For students taking the Extended Assessment, scores at this level indicate an identifiable understanding of the academic concepts linked to the state's Benchmark 2 content standards for Science. Students demonstrate a relatively consistent recognition of the basic relationships evident in the natural world. Students who meet the Benchmark 2 Science standard demonstrate an initial/basic understanding of properties of matter, force and energy, and the basic structures, functions and interactions of living organisms in the environment.	 Recognize the unique properties and structure of matter (for example: solids, liquids, or gas) Recognize and predict the component stages of physical change in everyday objects and matter 	
	 Recognize the properties associated with force and motion (including gravity) 	
	 Recognize the interaction between energy and matter such as the transmission of electricity, and sound 	
	 Recognize the characteristics of various organisms and the associated needs and behaviors associated with organisms 	
	 Recognize and classify living organisms according to characteristics; recognize sequence associated with the life cycle of various organisms 	
	 Recognize the relatedness of organisms in the environment and the impact of one organism on another 	
	 Recognize the structures and physical developments in organisms that relate to survival and function 	
	 Recognize the potential uses and functions of materials 	
	 Recognize the characteristics and sequence of various seasons and associated weather 	
	 Understand the basic characteristics of planets and features of the solar system 	

Science Benchmark 2 (Fifth Grade)

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)	
Nearly Meets For students taking the Extended Assessment, scores at this level indicate an inconsistent or unpredictable understanding of the academic concepts linked to the state's Benchmark 2content standards for Science. Students demonstrate inconsistent, unpredictable or random (not repeatable) recognition of the basic relationships evident in the natural world. These students have not yet demonstrated a consistent understanding of properties of matter, force and energy, and the basic structures, functions and interactions of living organisms in the environment in a manner that appears to be greater than chance.	 Students who Nearly Meet the alternate standard have unpredictable, or fragmented skills that are not reflective of a Benchmark 2 achievement level but may infrequently or inconsistently: Recognize the unique properties and structure of matter (for example: solids, liquids, or gas) Recognize and predict the component stages of physical change in everyday objects and matter Recognize the properties associated with force and motion (including gravity) Recognize the interaction between energy and matter such as the transmission of electricity, and sound Recognize the characteristics of various organisms and the associated needs and behaviors associated with organisms Recognize and classify living organisms according to characteristics; recognize sequence associated with the life cycle of various organisms Recognize the relatedness of organisms in the environment and the impact of one organism on another Recognize the potential uses and functions of materials Recognize the potential uses and sequence of various seasons and associated weather 	
	Understand the basic characteristics of planets and features of the solar system	
Does Not Yet Meet For students taking the Extended Assessment, scores at this level indicate that the student does not yet have a reliably measurable grasp of the academic concepts as presented by the assessment (and as linked to the state's Benchmark 2 content standards for Science). The student demonstrates extremely limited to no recognition of the basic relationships evident in the natural world.	Students who Do Not Yet Meet the alternate standard are unable to be successful at the content prompts in the tasks.	

Science Benchmark 2 (Fifth Grade)

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)	
Exceeds For students taking the Extended Assessment, scores at this level indicate a strong understanding of the academic concepts linked to the state's Benchmark 3 content standards for Science. Students demonstrate a consistent recognition of relationships evident in the natural world. Students consistently demonstrate a solid understanding of properties of matter, force, energy, motion as well as the basic structures, functions and interactions of living organisms in the environment.	 Students who Exceed the alternate standard consistently and predictably: Recognize the unique properties and structure of matter and how matter can change state Recognize and predict the impact of force on mass and motion Recognize the properties associated with force and motion (including gravity) Recognize the manner in which energy is transformed for use Recognize the characteristics and structures of various organisms and the associated needs and behaviors associated with organisms Recognize the movement of energy and the role of energy in photosynthesis and other systems Recognize the role of heredity in the characteristics of organisms (particularly humans and animals) Recognize the characteristics of animals and organisms Recognize the characteristics of the Earth, its structure and climate Understand the connections associated with viewing Earth as a system 	

Science Benchmark 3 (Eighth Grade)

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Meets	Students who Meet the alternate standard frequently:
For students taking the Extended Assessment, scores at this level indicate an identifiable understanding of the academic concepts linked to the state's Benchmark 3 content standards for Science. Students demonstrate a	 Recognize the unique properties and structure of matter and how matter can change state
	 Recognize and predict the impact of force on mass and motion
	 Recognize the properties associated with force and motion (including gravity)
relatively consistent recognition of the basic relationships evident in the natural world. Students who	 Recognize the manner in which energy is transformed for use
meet the Benchmark 3 Science standard demonstrate a general understanding of properties of matter, force, energy, motion as well as the basic structures, functions and interactions of living organisms in the environment.	 Recognize the characteristics and structures of various organisms and the associated needs and behaviors associated with organisms
	 Recognize the movement of energy and the role of energy in photosynthesis and other systems
	 Recognize the role of heredity in the characteristics of organisms (particularly humans and animals)
	 Recognize the roles of evolution, selection and adaptation in the lives and behaviors of animals and organisms
	 Recognize the characteristics of the Earth, its structure and climate
	 Understand the connections associated with viewing Earth as a system

Science Benchmark 3 (Eighth Grade) continued

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Nearly Meets For students taking the Extended Assessment, scores at this level indicate an inconsistent or unpredictable understanding of the academic concepts linked to the state's Benchmark 3 content standards for Science. Students demonstrate inconsistent, unpredictable or random (not repeatable) recognition of the basic relationships evident in the natural world. These students have not yet demonstrated a consistent understanding of the properties of matter, force and energy, or the basic structures, functions and interactions of living organisms in the environment in a manner that appears to be greater than chance.	 Students who Nearly Meet the alternate standard have unpredictable, or splintered skills that are not reflective of an Benchmark 3 achievement level but may infrequently or inconsistently: Recognize the unique properties and structure of matter and how matter can change state Recognize and predict the impact of force on mass and motion Recognize the properties associated with force and motion (including gravity) Recognize the characteristics and structures of various organisms and the associated needs and behaviors associated with organisms Recognize the movement of energy and the role of energy in photosynthesis and other systems Recognize the role of heredity in the characteristics of organisms (particularly humans and animals) Recognize the characteristics of the Earth, its structure and climate Understand the connections associated with viewing Earth as a system
Does Not Yet Meet For students taking the Extended Assessment, scores at this level indicate that the student does not yet have a reliably measurable understanding of the academic concepts as presented by the assessment (and as linked to the state's Benchmark 3 content standards for Science). The student demonstrates extremely limited to no recognition of the basic relationships evident in the natural world.	Students who Do Not Yet Meet the alternate standard are unable to be successful at the content prompts in the tasks.

Science Benchmark 3 (Eighth Grade) continued

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)	
Exceeds For students taking the Extended Assessment, scores at this level indicate a strong understanding of the academic concepts linked to the state's CIM level content standards for Science. Students demonstrate a consistent recognition of the basic relationships evident in the natural world. Students consistently demonstrate a solid understanding of properties of matter, force, motion, energy, and the basic structures, functions and interactions of living organisms in the environment, including some specific knowledge.	 Students who Exceed the alternate standard consistently and predictably: Recognize the unique properties and structure of matter and how matter can change state Recognize and predict the impact of force on mass and motion Recognize the properties associated with force and motion (including gravity) Recognize the manner in which energy is transformed for use Recognize the characteristics and structures of various organisms and the associated needs and behaviors associated with organisms Recognize the movement of energy and the role of energy in photosynthesis and other systems Recognize the role of heredity in the characteristics of organisms (particularly humans and animals) Recognize the characteristics of the Earth, its structure and climate Understand the connections associated with viewing Earth as a system 	

Science Benchmark 3 (Tenth Grade)

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Meets	Students who Meet the alternate standard frequently:
For students taking the Extended Assessment, scores at this level	 Recognize the unique properties and structure of matter and how matter can change state
Indicate an identifiable understanding of the academic concepts linked to the state's CIM	 Recognize and predict the impact of force on mass and motion
level content standards for Science. Students demonstrate a relatively	 Recognize the properties associated with force and motion (including gravity)
consistent recognition of the basic relationships evident in the natural world. Students who meet the CIM	 Recognize the manner in which energy is transformed for use
level Science standards demonstrate an applied understanding of properties of matter, force and energy, motion and the basic structures, functions and interactions of living organisms in the environment.	 Recognize the characteristics and structures of various organisms and the associated needs and behaviors associated with organisms
	 Recognize the movement of energy and the role of energy in photosynthesis and other systems
	 Recognize the role of heredity in the characteristics of organisms (particularly humans and animals)
	 Recognize the roles of evolution, selection and adaptation in the lives and behaviors of animals and organisms
	 Recognize the characteristics of the Earth, its structure and climate
	 Understand the connections associated with viewing Earth as a system

Science Benchmark 3 (Tenth Grade) continued

Science Benchmark 3	(Tenth Grade)	continued
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Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Nearly Meets For students taking the Extended Assessment, scores at this level indicate an inconsistent or unpredictable understanding of the academic concepts linked to the state's CIM level content standards for Science. Students demonstrate inconsistent, unpredictable or random (not repeatable) recognition of the basic relationships evident in the natural world. These students have not yet demonstrated a consistent understanding of properties of matter, force and energy, and the basic structures, functions and interactions of living organisms in the environment in a manner that appears to be greater than chance.	 Students who Nearly Meet the alternate standard have unpredictable, or splintered skills that are not reflective of a CIM level achievement level but may infrequently or inconsistently: Recognize the unique properties and structure of matter and how matter can change state Recognize and predict the impact of force on mass and motion Recognize the properties associated with force and motion (including gravity) Recognize the characteristics and structures of various organisms and the associated needs and behaviors associated with organisms Recognize the movement of energy and the role of energy in photosynthesis and other systems Recognize the roles of evolution, selection and adaptation in the lives and behaviors of animals and organisms Recognize the characteristics of the Earth, its structure and climate Understand the connections associated with viewing Earth as a system
Does Not Yet Meet For students taking the Extended Assessment, scores at this level indicate that the student does not yet have a reliably measurable understanding of the academic concepts as presented by the assessment (and as linked to the state's CIM level content standards for Science). The student demonstrates extremely limited to no recognition of the basic relationships evident in the natural world.	Students who Do Not Yet Meet the alternate standard are unable to be successful at the content prompts in the tasks.

Writing

Writing Elementary Fourth Grade

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Exceeds For a student taking the Extended Assessment scores at this level indicate a strong grasp of the academic concepts linked to the state's grade level content standards for Writing. Students demonstrate a consistent ability to communicate through writing on selected tasks. Students consistently demonstrate an understanding of the simplified conventions, structures, and expectations associated with the act of creating the written text, and the process involved in creating a body of text. Students consistently demonstrate a working understanding that writing can be used to communicate as well as a working understanding of the interaction between a writer and his or her audience.	 Students who Exceed the alternate standard consistently and predictably: Demonstrate an understanding of the basic conventions of writing including spelling, punctuation, grammar, and capitalization Produce written work that can be identified in the context of sentences and paragraphs Demonstrate basic applied compositional skills at narrative writing Produce written work that can be identified in the context of words and sentences. Demonstrate basic applied compositional skills at research writing Demonstrate basic applied compositional skills at research writing Demonstrate basic applied compositional skills at persuasive writing Demonstrate basic applied compositional skills at persuasive writing Demonstrate basic applied compositional skills at persuasive writing
Meets For students taking the Extended Assessment, scores at this level indicate an identifiable grasp of the academic concepts linked to the state's grade level content standards for Writing. Students demonstrate a relatively consistent ability to communicate through writing on selected tasks. Students who meet the standard demonstrate a basic understanding of the conventions, structures, and expectations associated with the act of creating the written text, and the process involved in creating a body of written work. Students demonstrate a basic understanding that text can be used to communicate as well as a working understanding of the interaction between a writer and his or her audience.	 Students who Meet the alternate standard frequently: Demonstrate an understanding of the basic conventions of writing including spelling, punctuation, grammar, and capitalization Produce written work that can be identified in the context of sentences and paragraphs Demonstrate basic applied compositional skills at narrative writing Produce written work that can be identified in the context of words and sentences. Demonstrate basic applied compositional skills at research writing Demonstrate basic applied compositional skills at research writing Demonstrate basic applied compositional skills at persuasive writing Demonstrate basic applied compositional skills at persuasive writing Demonstrate basic applied compositional skills at persuasive writing

Writing Elementary Fourth Grade (continued)

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Nearly Meets For students taking the Extended Assessment, scores at this level indicate an inconsistent or unpredictable grasp of the academic concepts linked to the state's grade level content standards for Writing. Students demonstrate inconsistent, unpredictable or random (not repeatable) ability to communicate through writing on selected tasks. These students have demonstrated limited basic understanding of the conventions, structures, and expectations associated with the act of creating the written text, and are only infrequently able to demonstrate a limited understanding that writing can be used to communicate with an audience.	 Students who Nearly Meet the alternate standard have unpredictable, or randomly splintered skills that are not reflective of a fourth grade achievement level but may infrequently or inconsistently: Demonstrate an understanding of the basic conventions of writing including spelling, punctuation, grammar, and capitalization Produce written work that can be identified in the context of sentences and paragraphs Demonstrate basic applied compositional skills at narrative writing Produce written work that can be identified in the context of words and sentences. Demonstrate basic applied compositional skills at research writing Demonstrate basic applied compositional skills at research writing Demonstrate basic applied compositional skills at persuasive writing Demonstrate basic applied compositional skills at persuasive writing
Does Not Yet Meet For students taking the Extended Assessment, scores at this level indicate that the student does not yet have a reliably measurable grasp of the academic concepts as presented by the assessment (and as linked to the state's grade level content standards for Writing). The student demonstrates no (or limited) ability to communicate through writing on selected tasks. These students are unable to demonstrate their understanding that writing can be used to communicate with an audience.	Students who Do Not Yet Meet the alternate standard are unable to be successful at the content prompts in the tasks.

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Exceeds For students taking the Extended Assessment, scores at this level indicate a strong understanding of the academic concepts linked to the state's grade level content standards for Writing. Students demonstrate a consistent ability to communicate through writing. Students consistently demonstrate an understanding of simplified conventions, structure, and expectations associated with the act of writing. Students consistently demonstrate a working understanding of the interaction between a writer and his or her audience.	 Students who Exceed the alternate standard consistently and predictably: Demonstrate an understanding of the basic conventions of writing including punctuation, grammar, capitalization, and spelling Produce written work that can be identified in the context of words and sentences. Produce written work that can be identified in the context of sentences and paragraphs Demonstrate an understanding of the basic expectations associated with types of writing and writing purposes. Demonstrate basic applied compositional skills at narrative writing Demonstrate basic applied compositional skills at research writing Demonstrate basic applied compositional skills at research writing Demonstrate basic applied compositional skills at research writing

Seventh Grade Writing

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Meets	Students who Meet the alternate standard frequently:
For students taking the Extended Assessment, scores at this level indicate an identifiable understanding of the academic concepts linked to the state's grade level content for writing. Students demonstrate a relatively consistent ability to communicate in writing. Students who meet the standard demonstrate a basic understanding of simplified conventions, structure, and expectations associated with the act of writing. Students demonstrate a basic understanding of the interaction between a writer and his or her audience.	 Demonstrate an understanding of the basic conventions of writing including punctuation, grammar, capitalization, and spelling
	 Produce written work that can be identified in the context of words and sentences.
	Produce written work that can be identified in the context of sentences and paragraphs
	 Demonstrate an understanding of the basic expectations associated with types of writing and writing purposes.
	Demonstrate basic applied compositional skills at narrative writing
	Demonstrate basic applied compositional skills at persuasive writing
	Demonstrate basic applied compositional skills at research writing
	Demonstrate a basic knowledge of the steps associated with completing a job application

Seventh Grade Writing (continued)

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Nearly Meets For students taking the Extended Assessment, scores at this level indicate an inconsistent or unpredictable understanding of the academic concepts linked to the state's grade level content standards for Writing. Students demonstrate inconsistent unpredictable or random (not repeatable) ability to communicate in Writing. These students have not demonstrated basic understanding of simple conventions, structure, and expectations of writing. Students are only infrequently able to demonstrate an understanding that writing can be used to communicate with an audience.	 Students who Nearly Meet the alternate standard have unpredictable, or splintered skills that are not reflective of a seventh grade achievement level but may infrequently or inconsistently: Demonstrate an understanding of the basic conventions of writing including punctuation, grammar, capitalization, and spelling Produce written work that can be identified in the context of words and sentences. Produce written work that can be identified in the context of sentences and paragraphs Demonstrate an understanding of the basic expectations associated with types of writing and writing purposes. Demonstrate basic applied compositional skills at narrative writing Demonstrate basic applied compositional skills at persuasive writing Demonstrate basic applied compositional skills at research writing Demonstrate a basic applied compositional skills at research writing
Does Not Yet Meet For students taking the Extended Assessment, scores at this level indicate that the student does not yet have an reliable understanding of the academic concepts linked to seventh grade Writing content. The student demonstrates extremely limited ability to communicate through writing. These students are unable to demonstrate their understanding that writing can be used to communicate with an audience.	Students who Do Not Yet Meet the alternate standard are unable to be successful at the content prompts in the tasks.

Seventh Grade Writing (continued)

Tenth Grade Writing

Alternate Achievement Level A (General)	Alternate Achievement Level Descriptor (Specific)
Exceeds Sipred Strengthen States a strong understanding of the academic concepts linked to the state's grade level content standards for Writing. Students demonstrate a consistent ability to communicate through writing. Students consistently demonstrate an understanding of simplified conventions, structure, and expectations associated with the act of writing. Students consistently demonstrate a working understanding of the interaction between a writer and his or her audience.	 Demonstrate an understanding of the basic conventions of writing including punctuation, grammar, capitalization, and spelling Produce written work that can be identified in the context of words and sentences. Produce written work that can be identified in the context of sentences and paragraphs Demonstrate an understanding of the basic expectations associated with types of writing and writing purposes. Demonstrate basic applied compositional skills at narrative writing Demonstrate basic applied compositional skills at persuasive writing Demonstrate basic applied compositional skills at research writing Demonstrate basic applied compositional skills at research writing

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Meets For students taking the Extended Assessment, scores at this level indicate an identifiable understanding of the academic concepts linked to the state's grade level content for writing. Students demonstrate a relatively consistent ability to communicate in writing. Students who meet the standard demonstrate a basic understanding of simplified conventions, structure, and expectations associated with the act of writing. Students demonstrate a basic understanding of the interaction between a writer and his or her audience.	Students who Meet the alternate standard frequently, (but
	 Demonstrate an understanding of the basic conventions of writing including punctuation, grammar, capitalization, and spelling
	 Produce written work that can be identified in the context of words and sentences.
	 Produce written work that can be identified in the context of sentences and paragraphs
	 Demonstrate an understanding of the basic expectations associated with types of writing and writing purposes.
	 Demonstrate basic applied compositional skills at narrative writing
	 Demonstrate basic applied compositional skills at persuasive writing
	 Demonstrate basic applied compositional skills at research writing
	Demonstrate a working knowledge of the steps associated with completing a job application

Tenth Grade Writing (continued)

Tenth Grade Writing

Alternate Achievement Level (General)	Alternate Achievement Level Descriptor (Specific)
Nearly Meets For students taking the Extended Assessment, scores at this level indicate an inconsistent or unpredictable understanding of the academic concepts linked to the state's grade level content standards for Writing. Students demonstrate inconsistent unpredictable or random (not repeatable) ability to communicate in Writing. These students have not demonstrated basic understanding of simple conventions, structure, and expectations of writing. Students are only infrequently able to demonstrate an understanding that writing can be used to communicate with an audience.	 Students who Nearly Meet the alternate standard have unpredictable, or splintered skills that are not reflective of a tenth grade achievement level but may infrequently or inconsistently: Demonstrate an understanding of the basic conventions of writing including punctuation, grammar, capitalization, and spelling Produce written work that can be identified in the context of words and sentences. Produce written work that can be identified in the context of sentences and paragraphs Demonstrate an understanding of the basic expectations associated with types of writing and writing purposes. Demonstrate basic applied compositional skills at narrative writing Demonstrate basic applied compositional skills at research writing Demonstrate a working knowledge of the steps associated with completing a job application
Does Not Yet Meet For students taking the Extended Assessment, scores at this level indicate that the student does not yet have an reliable understanding of the academic concepts linked to seventh grade Writing content. The student demonstrates extremely limited ability to communicate through writing. These students are unable to demonstrate their understanding that writing can be used to communicate with an audience.	Students who Do Not Yet Meet the alternate standard are unable to be successful at the content prompts in the tasks.

Appendix 2.D. Extended Assessment Standard Setting Process, Questions, and Guidelines

Extended Assessment Standard Setting Process, Questions, and Guidelines



Oregon Department of Education Behavioral Research and Teaching Extended Assessment Standard Setting June 2007

How do I know where to place my bookmark?

The placement of the bookmark is an expert judgment based on your knowledge of the test, the test administration, the population, and the expectations for the population. It is your best estimate of what a student should demonstrate in order to be a member of a category.

Will the placement of my bookmark mean that students will have to get *each* of the items (in the previous category) correct in order to qualify as proficient in the category? What if they get some of the preceding items correct, but also some from beyond the bookmark correct?

Setting the bookmark provides a guideline for where the minimum cutscore should be set based on the content of the information covered in the preceding items. Once standards have been set on a final assessment, a student can get items correct that fall both before and after the bookmark and still be considered a member of the category as long as the cutscore is achieved.

Will the page number reflect the minimum score?

The page number reflects the order of difficulty of an item in reference to the other items and does not indicate what the raw score will be once calibrated to the assessment score scale.

Should items from every single standard be represented in each of the proficiency categories?

Not necessarily, this is a judgment that is based on your interpretation of the Achievement Level Descriptors for the category. Whether or not each category should include all standards will vary by grade and subject. In many cases, the more standards included in a category, the more difficult the category becomes.

Why are there four categories, but only 3 bookmarks?

Your bookmark corresponds to the minimum level of achievement in a category. As a result, you will not need to place a bookmark to indicate a minimum for "Does Not Yet Meet".

Should I place my bookmark (make my judgments) in reference to the population of students that I routinely serve?

No. While your knowledge of the students in your classroom is useful in this exercise, your considerations must apply to all students in the population. As a result you must

only consider a hypothetical "target student" in all of your deliberations. For each of the categories this "target student" will be the student who just "makes it" gains entry into the category with minimal qualifications into that category.

Which page does the bookmark refer to?

The bookmark separates categories. The "Nearly meets" bookmark (for example) separates the "Does not meet" category, from the "Nearly meets" category. Select the page number that corresponds to the page immediately preceding the bookmark this reflects the item with the highest difficulty level that will be included in the category.

What process should I use?

Start at the beginning of the booklet. Evaluate each item in the booklet to determine what student skill makes this item more difficult than the previous item. Write down your reason in pencil in your booklet. You will need this information for subsequent rounds.

You are attempting to determine the point at which the progressive skill set between categories changes. Once you have set your bookmark you have indicated that the pages prior to your bookmark will need to be mastered in order to make category membership. Document the page number that the bookmark indicates. This is the number you will give to your table leader. Repeat this process at each of the subsequent rounds incorporating information from discussions and impact data when they are presented.

If you get stuck:

Narrow down the items you think approximate a category and then deliberate further to narrow down where you think the bookmark should fall based on the distinctions between individual items. Remember that you will have additional opportunities to refine this selection in the following rounds.

How are cutscores determined based on student ability and item difficulty?

Typical bookmarking procedures use a 67% probability of item success to determine group membership, which, simply put, means that mastery of an item is defined by at least 67% of the students in that category being able to demonstrate success at a given item.

Items that fewer than 67% of the population can successfully answer are likely to fall in a higher skill category and the item that falls at that point represents the distinction between categories.



 $\langle \neg / \Box \rangle$

References

Based on: CTB Standard Setting Handbook 2005 CTB/McGraw-Hill LLC Cizek, G. J. (Ed.). (2001). Setting performance standards: Concepts, methods, and

perspectives. Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.

Appendix 2.E: Panel Justification and Table Notes by Subject Math

Day 1

- 1. Each person came up with their own score, individually.
- 2. We reported scores to Andrea who wrote them down.
- 3. Then, Sue averaged the scores to come up with our aggregate totals. (For 3^{rd} grade)
- 4. We reported 4th and 5th grade scores together. We noticed some score variations when we wrote down these scores. So, we stopped and discussed our reasons for placing NM, M, and E's. We came up with a lot of good points that evolved into conversations about Philosophy and Methodology. Teachers talked about items they wanted included in order to justify Meets or Exceeds. Meets and Exceeds are the only 2 areas that required debate. The group almost consistently wants to keep the cutoff the same or raise it a few points.

Day 2

Look at data from Jerry's group. Debate adjusting NM, M, and E. Plug in numbers to computer to see how it changes percentages. We feel that for 6th graders, multi-grade Math test is too difficult. That would justify a Meet score of 9, somewhat low. We had a B4 number in Exceeds (45%) and a small number in Meets. By moving Exceeds from 26 to 30, we were able to balance M (25%) and E (25%), plus, 30 to 31 questions in the test marks a change in Mathematical thinking. We agree on 9 for M and 6 for NM. Still debating Exceeds at 30. We decided to set 6th grade at 30. Then, we talked about moving Exceeds in 7th grade from 32 to 34 to show one year's growth. We look at the changes we decided to make in 6th grade and how that changes the meaning of our cutscores in 7th and 8th grade. We agreed and submitted paperwork.

6th :

NM stayed (five of 10 descriptors addressed)

M – by pg. 9, 5 of 10 descriptors have been presented 2x for consistency

X – by pg. 30, Math vocabulary became more important in the application and completion

7th :

X - pg. 34, again, Math vocabulary plays into the knowledge needed

8th:

X - to pg. 38, vocabulary was needed. Also, content to pg. 37 fell within the 8th grade meeting descriptor (10 descriptors with multiple opportunities to demonstrate)

6/2/2008

Middle School Math Notes:

Worked individually for 6th grade. Reported scores, calculated Median then discussed. We had scores all over the place in each cut-off. It required a lot of discussion and disagreement. We tried to use AD's and Alternate Achievement Level. After much discussion, we wound up close to Median in NM and Meets. Range for Exceeds was 21 to 39 (18)!!! We each shared rationales. Median was 29. After arguing, we skewed down to 26, feeling, at least initially, we were agreed, more than the standards required. When we discussed Meets; the Medians made a lot of sense. Same with Exceeds, except for Nearly Meets which we skewed down to 15. **6/3/2008**

High School Math

Worked individually and reported scores for NM, M, and E. Created Means and began discussing placement. Agreed quickly to 48 for Exceeds. We had to wait that long for a fraction problem. We also agreed quickly to NM at 8. Then, our Mean for Meets was 17, and we all seemed to think that was a good fit.

- (10 Bullets in ALD Descriptor)
- NM by pg. 8, 5 bullets had been addressed.
- **M** by pg. 17, 8 bullets had been addressed with 7 being addressed. (were through once)
- **X** Turning point @ pg. 49 to higher level application (Algebra equation \rightarrow graph...) Things in relation to other things not obvious or in print.

Reading

4th Nearly Meets 30-31

Dictionary Skills

More bullet points on specific descriptors for 3rd grade than 4th or 5th

 5^{th} grade Meets at p. 58 step calibration moves from .98 - 1.02

5th grade Exceeds p. 89

Elementary

- Need to use consistent language on $3^{rd} \rightarrow 5^{th}$ grades with scaling of word descriptions.
- Words such as "relatively predictably" are vague and not able to be explained.

High School

We felt comfortable with the 36% which did not meet due to the limitations of the population and the fact that at this level we see the greatest depth and breadth of knowledge and complexity. This same rationale also applies to the Exceeds category.

Writing

Elementary Writing

17 vs. 19: 18 is easy also. Scale down 2 points

19 vs. 21: 19 is more difficult than 20. Scale up 2 pts.

Round 2 Concensus \rightarrow Leave as is 19/37/78

Differences in item difficulty perception

Round 3 Concensus remains: NM M E 19 / 37 / 78

Middle Writing

Round 1

15 Nearly Meets: Cognition to task changed - level of 17 difficulty higher

23 Starting @ 23 have to express opinion

21 - Using higher level punctuation

- More complex overall

Second Round Nearly Meets 21

Meets

27 - Writing independent thoughts

37 - Shift in expectations - more evaluation

38

41 - Need to be able to put together ideas - express a reason

- 42 Had to do both
- 69 High level skill from these
- 71 out
- 95 Between 69 94 more skills that seem to be Meets

78 – Majority vote 2nd round **Third Round**

All in agreement with cut scores

HS Writing

Second Round

Nearly Meets - Split between 19 & 21 -- Went with average of 20

Meets

57 - Paragraphing -- Decided on mode 38 - Starting higher level thinking skills

Exceeds

78-Strong understanding

61 - First time kids have to think of others' impressions

Consensus 80

Round 3 Defense

HS Students would either know or not know the concept CIM level resulting in higher percentages in "Does Not yet Meet" and "Meets" categories.

Group is in consensus.

Also not many questions that fell into the "Nearly Meets" category

Chapter 3: Reliability and Validity Evidence

3.1. OVERVIEW

This chapter presents evidence in support of the technical reliability and validity of Oregon's Extended Assessments as developed for the 2007-2008 administration. This chapter refers to analyses and reviews conducted on outcome data from the approximately 5300 students who participated across the four subject area assessments during this academic year, as well as data from assessment trainings and proficiency reports, structured studies, and reviews of process and procedure associated with test development. Student-level analyses rely on either raw summed data from each of the assessments or IRT scaled data based on the 07-08 student population who took this assessment. This chapter is supported by several appended documents which contain the raw calculations associated with the findings. The findings are predominantly summarized in the text of this chapter.

3.2. PURPOSE OF OREGON'S ALTERNATE ASSESSMENT

In this technical report, we present data to support the claim that Oregon's alternate assessments (the Extended Assessments) provides the state with technically adequate student performance data to ascertain proficiency on grade level state content standards for students with significant disabilities. The alternate assessments based on alternate achievement standards (AA-AAS) are linked to grade level academic content; generate reliable outcomes at the item, task, and test level; have content designed to include students with all level of presentation, expression and participation needs; have a cogent internal structure; and fit within a network of relations within and across various dimensions of content related to and relevant for making proficiency decisions.

3.3. INTRODUCTION TO TECHNICAL ADEQUACY

As elaborated by Messick (1989)², 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

² Messick, S. (1989). Validity. In R. L. Linn (Ed.), *Educational measurement* (3rd ed., pp. 13-103). New York: American Council on Education.

documented at both the item and total test levels. We use the *Standards*³ (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.⁴ 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 chapter addresses the latter four requirements noted above, with other (appended) documents providing essential information on the standards and statewide assessment system (see technical specifications and alignment documents for information on academic content 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.

The *content related evidence* section of this chapter (3.4) provides information on technical specifications and the quality of review used during the design and development of the alternate assessment (3.4.1). 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. The technical specifications appendices should be referenced for more specific information on the blueprint, the alignment, and the item types. In this section, we also present the results from an alignment study (3.4.2) in which we document the linkage to grade level standards for elementary, middle, and high school grade bands. Finally, we summarize outcome data (3.4.3) as a reference for understanding subsequent validity evidence and include two types of performance on (a) Prerequisite Skills and (b) content skills and knowledge.

The *reliability* section of this chapter (3.5) presents three types of analyses: (a) internal consistency for each task in each subject area for every grade level (3.5.1), (b) inter-item correlations (3.5.2), and (c) reliability from administration (3.5.3). The test has high reliability in every task and subject area.

The *response process* section of this chapter (3.6) presents outcome data on the manner in which students took the tests. First we address the training in administration. Because we had designed a flexible performance assessment with various options for teachers to use in testing students, it was imperative to have a work force fully informed. For the 2007-2008 academic year's administration of the Oregon Extended Assessment we developed a new training structure that included qualified mentor/trainers and a web-based training and proficiency system that required all users to pass a qualifying test. We report high levels of knowledge and proficiency levels on the qualifying test (see section 3.6.1). Second, we address the manner in which students

³ American Educational Research Association (AERA), American Psychological Association, & National Council on Measurement in Education (1999). *Standards for educational and psychological testing*. Washington, DC: AERA.

⁴ 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*

participated, and explain the process that allowed teachers the options of not administering the item because it was either *too difficult* (coded 'D' in data entry), *inappropriate* (coded 'I' in data entry), or whether the student refused to respond (coded 'R' in data entry). In all of the data analyses, items coded 'D' or 'R' were converted to 0 (zero) while items coded 'I' were converted to 'Missing' (see section 3.6.2).

Because we had designed an assessment that first documented the student's access skill (prerequisite skill) to assist teachers in presenting the content items, we also describe the options for participation using prerequisite skills assessments to allow teachers use of various levels of support. Prerequisite skills were assessed to provide the necessary supports to the student to assure that the assessment was administered appropriately according to their expressive, presentation, and participation needs. Appropriate test administration can falls into one of four levels: full physical support, partial physical support, prompted support (verbal, visual, or gestural), and no support. Content prompts were designed to document students' skill and knowledge on grade level academic content standards. In section 3.6.3, we report moderately high relation between Prerequisite Skills outcomes and content knowledge based on raw scores. These relationships were in the high .60s and .70s in Reading and Writing and slightly lower (.50s to .60s) in Mathematics and Science (see section 3.6.3).

We also designed two test administration types that Individualized Educational Program (IEP) teams could choose to use based on the student's expressive, presentation, and participation needs: (a) Standard Administration or (b) Scaffold Administration. Both types addressed exactly the same content and only differed in the amount of Scaffold provided to access the target skill (content prompt). In this document, we present data that demonstrates that virtually all student performance outcomes were explained by the Pre-requisite Skills level and not by the test administration format. This critical finding is consistent with practical theory that the nature of a student's need (as demonstrated by Prerequisite level) plays more of a role in any differences between the administration options than differences inherent in the administration. Typically, about 25% to 45% of the variance was accounted by the Prerequisite Skills and only 3% to 12% accounted for by the test administration type (see section 3.6.3a).

Finally, we describe the results from a special study in which we had middle school teachers readminister the test using the opposite administration type than they had used as part of the state test. About half the teachers had used the Scaffold Administration option of the assessment for their students during the official test window and therefore, they administered the Standard Administration of the assessment for this special study. Contrariwise, the other half had used the Standard Administration option during the official test window and therefore administered the Scaffold Administration in the special study. In analyzing both the average performance and the consistency of agreement on item values, we found very comparable performance between the two types of administration (see section 3.6.3b).

The *internal structure* section of this chapter (3.7) presents data on a series of factor analyses conducted separately within each alternate assessment subject area (Reading, Writing, Mathematics, and Science) and grade level (elementary, middle or secondary). As found in earlier item and task analyses, the tasks in each test (and subject area) 'hung together' well with high correlations related to a single factor. Likely this result is due to the manner in which the test administration options available to students, when selected appropriately, served

to 'neutralize' or provide access to the various constructs or dimensions of each subject area (e.g. decoding and comprehension in reading or computation and problem-solving in mathematics).

The *criterion-related evidence* section of this chapter (3.8) documents how well the test fits within a network of relationships. Perhaps the best model for understanding criterion-related evidence comes from Campbell and Fiske (1959)⁵ in their description of the multi-trait, multi-method analysis. [N. B. we translate the term 'trait' to mean 'skill']. In this process (several) different traits are measured using (several) different methods to provide a correlation matrix that should reflect specific patterns supportive of the claim being made (that is, provide positive validation evidence). Sometimes, these various measures are of the same or similar skills, abilities, or traits, and other times, they are of different skills, abilities, or traits. We present data that quite consistently reflects higher relations among tasks **within** an academic subject than **between** academic subjects (see section 3.8.1). We also present data in which performance on content prompts is totaled within categories of disability, expecting relations that would reflect appropriate differences (see Tindal, McDonald, Tedesco, Glasgow, Almond, Crawford, & Hollenbeck, 2003).⁶ See section 3.8.2.

3.4. CONTENT RELATED EVIDENCE

In part, evidence of content coverage is concerned with judgments about "the adequacy with which the test content represents the content domain" (AERA et al., 1999, p. 11)⁷. As a whole, the test is comprised of sets of items that sample student performance on the intended domains. The expectation is that the items cover the full range of intended domains, with a sufficient number of items so that scores credibly represent student knowledge and skills in those areas. Without a sufficient number of items, the potential exists for a validity threat due to construct under-representation (Messick, 1989)⁷.

Our foundation of validity evidence from content coverage comes in the form of test blueprints or test specifications. Among other things, the *Standards* (AERA et al., 1999)⁷ suggest specifications should "define the content of the test, the number of items on the test, and the formats of those items" (Standard 3.3, p. 43).⁸

⁵ Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multi-trait, multimethod matrix. In W. A. Mehrens & R. L. Ebel (Eds.), *Principles of educational and psychological measurement: A book of selected readings* (pp 273-302). Chicago, IL: Rand McNally & Company.

⁶ Tindal, G., McDonald, Tedesco, M., Glasgow, A., Almond, P., Crawford, L., & Hollenbeck, K. (2003). Alternate assessments in reading and math: Development and validation for students with significant disabilities. *Exceptional Children*, 69(4), 481-494.

⁷ Messick, S. (1989). Validity. In R. L. Linn (Ed.), *Educational measurement* (3rd ed., pp. 13-103). New York: American Council on Education.

⁸ American Educational Research Association (AERA), American Psychological Association, & National Council on Measurement in Education (1999). *Standards for educational and psychological testing.* Washington, DC: AERA.

3.4.1 Summary of Test Specifications and Review Process

In another document that explicates the test specifications for each alternate assessment subject area (Reading, Writing, Mathematics, and Science), we describe the process of item and task development. All items and tasks were initially linked to grade level standards and a prototype was developed using principles of universal design with traditional item writing techniques. The most important component in these initial steps addressed language complexity and access to students using both receptive as well as expressive communication. Additionally, both breadth and depth were addressed (using vertical alignment and a taxonomy of knowledge, respectively). As part of this report, we have cross-mapped the items with the reporting categories and, as part of the revisions, have enhanced the alignment specifications to include reference to the respective Score Reporting Categories as used consistently with Oregon's General Assessment. The blueprint for this alignment is presented in each of the associated Test Specifications documents that are submitted in conjunction with this document. The Test Specifications documents (by subject) describe the process used to develop each item in relation to the state's content standards and then bundle them into cohesive tasks for administration. As mentioned previously, we developed two forms of each grade level test (Standard Administration and Scaffold Administration) to allow appropriate support systems for students with differing needs. In each task, we generally increased the depth of knowledge from the first to the last item within a task.

We developed the test iteratively. We developed items and reviewed them internally within the confines of the research and development group--Behavioral Research and Teaching (BRT). Tasks were then systematically piloted with relevant audiences, next the items were adjusted and reviewed, and finally successive edits were incorporated for field testing and operational use. As noted, each assessment was subject to rigorous review by panels of teachers who have worked with the Oregon Department of Education in various advising roles related to testing content in general education. As in previous years, the process of review used for the alternate assessments mirrored the process used for the state's general assessments. As a result, all alternate assessments were reviewed by content experts with K-12 classroom experience. In addition to rigorous content review, the assessments were also reviewed by independent contractors who represent the blind and deaf communities and who review the assessments to evaluate and advise on accessibility related to sensory deficits in these areas. In addition to these reviews, a formal alignment study of the assessments was conducted in the winter to evaluate the breadth of grade level content coverage. Reviews were also conducted by Special Educators to evaluate, edit and advise on presentation, administration, and scoring of the assessment, to ensure appropriate accessibility to students with significant cognitive disabilities.

Refer to Test Specifications by Subject under separate cover.

3.4.2 Alignment Study

Overview Data Interpretation and Conclusions

The purpose of this section of the report is to present the results from a study of the alignment (via linking) between the Oregon Extended Assessments in Reading, Writing, Mathematics, and Science and the grade level content standards adopted by the state of Oregon. Assessment items designed at the elementary, middle, and high school level were examined within each of four content areas.

It is important to note the historical context in which this study occurred. In the spring of 2007, teachers participated in an exploratory alignment analysis of the Extended Assessments when they were asked to locate one or more standards that aligned with one or more Extended Assessment items. In this study, conducted in May 2008, teachers completed a confirmatory alignment analysis, based in part on the findings from the 2007. In this study, teachers were provided with a list of grade level content standards from which assessment items were written and then directed to rate the alignment of standards with each of the items. Items were paired with standards in advance, making this a confirmatory analysis.

In this section, results are summarized and then synthesized within content area and across grade levels. Three tables for each grade band are presented within each content area, one table for each of the three dimensions earlier introduced:

(a) link between item and standard for which it is meant to measure. Scored on a scale of 1 - 3. Where "1"(not linked) describes items that do not appear to be linked to the standard; "2" (vaguely linked) describes items that appear linked to the content, but with substantial reduction of the content; and "3" (clearly linked) describes items that demonstrate a clear link to the content standards with no to minor reductions in depth and breadth of the standard. (b) depth of knowledge (DOK) of each item on respective assessment. Scored on a scale of 1 - 4 ranging from lowest to highest depth of knowledge. Where "1" refers to items reflecting knowledge and skill related to recognition and reproduction; "2" refers to items reflecting knowledge and skill related to skills and concept; "3" refers to items that require strategic thinking; and "4" referring to items requiring extended thinking.

(c) depth of knowledge of each grade-level content standard. Each of these ratings (linkage and depth of knowledge) was conducted individually and their agreement with each other calculated post-hoc. These were on the same scale as the DOK scale used for the items. And, although an agreement analysis on all items was calculated post-hoc, content level teams were asked to reach consensus on items on a subset of the assessment (pages 1, 4, 10, and the last page) during the actual workshop. Teams were asked to engage in consensus building exchanges as a way to establish and ensure the shared understanding of the links. This also resulted in a single evaluation finding per subject and level from the exercise and increased reliability of the ratings.

Context for Data Interpretation

In Oregon, content standards are located within common curriculum goals that are located under general strands. For example, in Mathematics, at grade 3, six common strands (e.g., geometry, measurement, etc.) "house" 19 common curriculum goals that provide the framework for 59
content standards. The same framework is provided at grades 3-10 for all content areas. A separate set of alternate achievement standards has not been developed.

Teachers in this alignment study were not asked to evaluate the breadth of standards represented on the Extended Assessments because this analysis was conducted in the exploratory workshop conducted in 2007. Instead, teachers were asked to evaluate the depth of knowledge represented by the standards that had already been identified as being measured on the Extended Assessments. Teachers also were asked to rate the depth of knowledge of the items on the Assessments, and in turn the linkage between these items and the state content standards. The goal was to confirm that the items did show linkage with grade level content standards in terms of content coverage and depth of knowledge; a critical analysis in light of the fact that Oregon does not have a set of alternate achievement standards from which the Extended Assessments could be directly created. The tables in the appendix reflect these three primary analyses. The number of tables is extensive, however, due to the fact that agreement was calculated on every item and across three pairs of raters. Moreover, because the Extended Assessments are designed to measure grade-level groups of standards (for example the Extended Elementary Assessments are composed of standards from grades 3, 4, and 5), and teachers were asked to evaluate the entire item bank within these grade level groups, teachers evaluated a minimum of 90 items on three different dimensions at each grade band.

Data Interpretation

This section includes 12 data summaries (each of the four content areas represented by an elementary, middle, and secondary assessment). Each data summary contains three tables (linkage, item depth of knowledge, and standard depth of knowledge) for a total of 36 tables. Each data summary also contains data related to the level of agreement across raters; only exact agreement data are shared. It is important to note that as the number of points on a rating scale decreases, the chance of reaching exact agreement increases. In this study, teachers were provided one 3-point scale for content and one 4-point scale for depth of knowledge. The number of opportunities to achieve exact agreement was quite large (at least 90 opportunities depending on grade level and content area) and as the number of opportunities increases the odds of reaching exact agreement across raters decreases. Finally, all data need to be interpreted as percentage scores as the number of content standards varies at each level and across each content area.

Summaries are provided in the following order: Reading, Writing, Mathematics, and Science. Grade band data is presented in a consistent order across content areas beginning with Elementary and concluding with High School.

Reading: Elementary

Table 3.1. Strength of Link Between Reading Items and Standards

		% o	f Items	
	Rater 1	Rater 2	Rater 3	Consensus
Not Linked	2.8	0	0	0
Vaguely Linked	8.4	9.8	13.3	35.4
Clearly Linked	88.8	90.2	86.7	64.6

Table 3.2. Item Depth of Knowledge Ratings

	% of Items			
	Rater 1	Rater 2	Rater 3	Consensus
Recognition and Reproduction (1)	0	0	0	61.9
Skill and Concept (2)	84.0	82.0	78.0	35.7
Strategic Thinking (3)	16.0	18.0	22.0	2.4
Extended Thinking (4)	0	0	0	0

Table 3.3. Standard Depth of Knowledge Ratings

	Rater 1	Rater 2	Rater 3	Consensus
Recognition and Reproduction (1)	0	0	0	0
Skill and Concept (2)	44.7	28.7	21.0	75.5
Strategic Thinking (3)	41.8	63.2	73.4	20.4
Extended Thinking (4)	13.5	8.1	5.6	4.1

Reading: Middle

Table 3.4. Strength of Link Between Reading Items and Standards

% of Items							
	Rater 1	Rater 2	Rater 3	Consensus			
Not Linked	2.0	0	0	0			
Vaguely Linked	10.1	4.8	3.4	0			
Clearly Linked	87.8	95.2	96.6	100.0			

Table 3.5. Item Depth of Knowledge Ratings

	% of Items			
	Rater 1	Rater 2	Rater 3	Consensus
Recognition and Reproduction (1)	0	0	0	0
Skill and Concept (2)	2.0	53.1	70.0	100.0
Strategic Thinking (3)	10.1	46.9	30.0	0
Extended Thinking (4)	87.8	0	0	0

Table 3.6. Standard Depth of Knowledge Ratings

	Rater 1	Rater 2	Rater 3	Consensus
Recognition and Reproduction (1)	0	0	0	0
Skill and Concept (2)	23.0	14.2	16.2	73.3
Strategic Thinking (3)	68.2	70.3	82.4	26.7
Extended Thinking (4)	8.8	15.5	1.4	0

Reading: High

Table 3.7. Strength of Link Between Reading Items and Standards

% of Items							
	Rater 1	Rater 2	Rater 3	Consensus			
Not Linked	0	.7	.7	0			
Vaguely Linked	1.4	4.1	7.5	6.9			
Clearly Linked	98.6	95.2	91.8	93.1			

Table 3.8. Item Depth of Knowledge Ratings

	% of Items			
	Rater 1	Rater 2	Rater 3	Consensus
Recognition and Reproduction (1)	4.0	0	4.0	0
Skill and Concept (2)	62.0	62.0	32.0	81.8
Strategic Thinking (3)	30.0	38.0	56.0	18.2
Extended Thinking (4)	4.0	0	8.0	0

Table 3.9. Standard Depth of Knowledge Ratings

	Rater 1	Rater 2	Rater 3	Consensus
Recognition and Reproduction (1)	5.4	6.1	6.8	6.9
Skill and Concept (2)	17.7	21.8	21.1	41.4
Strategic Thinking (3)	46.3	49.0	49.0	34.5
Extended Thinking (4)	30.6	23.1	23.1	17.2

Extended Reading Linkage

The Elementary Reading group recorded **exact** agreement 73% of the time on Standard depth of knowledge, 93% of the time on Item depth of knowledge, and approximately 90% on the strength of the linkage between Item and Standard. At Middle School, pairs of raters came to **exact** agreement an average of 80% of the time on Standard depth of knowledge, a little less than 80% of the time on Item depth of knowledge, and approximately 90% of the time on the strength of linkage between Item and Standard. Finally, at high school, pairs of raters reached **exact** agreement approximately 90% of the time on Standard depth of knowledge, 59% of the time on Item depth of knowledge, and approximately 93% of the time on the strength of the linkage between Item and Standard. Finally, at high school, pairs of raters reached **exact** agreement approximately 90% of the time on Standard depth of knowledge, 59% of the time on Item depth of knowledge, and approximately 93% of the time on the strength of the linkage between Item and Standard.

The linkage between items and standards continued to be strong in the Reading analyses. At the elementary and middle grade bands teachers rated items and standards as being linked approximately 90% of the time with some more closely linked than others. At the high school level this linkage was found almost 99% of the time. Ratings at the elementary level followed the established pattern with the depth of knowledge of items and standards hovering in the middle range with standards being slightly more complex. At the middle level all three raters scored similarly across the standards with the majority of ratings representing a "2" or "3" in terms of cognitive complexity.

The item ratings, however, show some discrepancies across raters with Raters 2 and 3 rating almost all of the items as a "2" or a "3" but Rater 1 rating over 80% of the items as requiring "extended thinking" or a score of "4." These data are so discrepant that they may represent an error during rating or data entry. Thus, the majority of items were found to represent a "2" or a "3" on the depth of knowledge skill; these findings are similar across the depth of knowledge of standards with a few more percentage points residing under the score of "4." Finally, at high school, a larger discrepancy existed across items and standards with standards being rated as having more cognitive complexity than items. Approximately 25% of the time, standards were rated as requiring "extended thinking" while items were only awarded this rating less than 5% of the time.

Writing: Elementary

Table 3.10. Strength of Link Between Writing Items and Standards

% of Items							
	Rater 1	Rater 2	Rater 3	Consensus			
Not Linked	0	3.9	6.7	-			
Vaguely Linked	10.9	5.9	20.0	-			
Clearly Linked	89.1	90.2	73.3	-			

Table 3.11. Item Depth of Knowledge Ratings

	% of Items			
	Rater 1	Rater 2	Rater 3	Consensus
Recognition and Reproduction (1)	0	30.2	53.3	-
Skill and Concept (2)	49.0	35.8	33.3	-
Strategic Thinking (3)	41.2	32.1	13.3	-
Extended Thinking (4)	9.8	1.9		

Table 3.12. Standard Depth of Knowledge Ratings

	Rater 1	Rater 2	Rater 3	Consensus
Recognition and Reproduction (1)	19.6	27.5	46.7	-
Skill and Concept (2)	11.8	13.7	13.3	-
Strategic Thinking (3)	39.2	39.2	26.7	-
Extended Thinking (4)	29.4	19.6	13.3	-

Writing: Middle

Table 3.13. Strength of Link Between Writing Items and Standards

% of Items							
	Rater 1	Rater 2	Rater 3	Consensus			
Not Linked	0	0	1.9	0			
Vaguely Linked	0	5.5	0	0			
Clearly Linked	100.0	94.5	98.1	100.0			

Table 3.14. Item Depth of Knowledge Ratings

	% of Items			
	Rater 1	Rater 2	Rater 3	Consensus
Recognition and Reproduction (1)	0	0	0	0
Skill and Concept (2)	60.0	66.7	24.0	72.7
Strategic Thinking (3)	30.0	31.4	54.0	27.3
Extended Thinking (4)	10.0	2.0	22.0	0

Table 3.15. Standard Depth of Knowledge Ratings

	Rater 1	Rater 2	Rater 3	Consensus
Recognition and Reproduction (1)	0	9.4	0	0
Skill and Concept (2)	33.9	15.1	15.9	35.3
Strategic Thinking (3)	54.8	43.4	54.5	47.1
Extended Thinking (4)	11.3	32.1	29.5	17.6

Writing: High

Table 3 16	Strongth o	f Link Raturan	Writing	Itoms and	Standards
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% of Items							
	Rater 1	Rater 2	Rater 3	Consensus			
Not Linked	1.8	1.8		0			
Vaguely Linked	23.2	28.6	8.9	10.0			
Clearly Linked	75.0	69.6	91.1	90.0			

Table 3.17. Item Depth of Knowledge Ratings

	% of Items			
	Rater 1	Rater 2	Rater 3	Consensus
Recognition and Reproduction (1)	16.1	16.1	16.1	50.0
Skill and Concept (2)	22.6	25.8	19.4	20.0
Strategic Thinking (3)	38.7	50.0	33.9	10.0
Extended Thinking (4)	22.6	8.1	30.6	20.0

Table 3.18. Standard Depth of Knowledge Ratings

	Rater 1	Rater 2	Rater 3	Consensus
Recognition and Reproduction (1)	8.9	8.9	0	25.0
Skill and Concept (2)	12.5	10.7	21.4	30.0
Strategic Thinking (3)	16.1	26.8	25.0	5.0
Extended Thinking (4)	62.5	53.6	53.6	40.0

Extended Writing Linkage

The Elementary Writing group reached **exact** agreement at a little less than 80% of the time on Standard depth of knowledge, approximately 40% of the time on Item depth of knowledge, and an average of 80% on the strength of the linkage between Item and Standard. At Middle School, pairs of raters came to **exact** agreement an average of 62% of the time on Standard depth of knowledge, a little less than 50% of the time on Item depth of knowledge, and almost 95% of the time on the strength of linkage between Item and Standard. Finally, at high school, pairs of raters reached **exact** agreement 84% of the time on Standard depth of knowledge, 73% of the time on Item depth of knowledge, and an average of 63% of the time on the strength of the linkage between Item and Standard depth of knowledge, 73% of the time on Item depth of knowledge, 73% of the time on Item depth of knowledge.

In Writing, 75% to 100% of all items across all grade bands were rated as clearly linked to the standard they were meant to measure. The remaining percentages in each grade band fell into the vaguely linked category with less than 1% of the items (in total) rated as "not linked." Again, "vaguely linked" implies a moderate reduction of content depth or complexity so these percentages still support the linkage of some of the easier items to their more complex standards. If all of the items were rated as "clearly linked" with no obvious reduction in breadth, depth, or complexity of the content, one would surmise that the test was not appropriate for use as an alternate assessment.

Depth of knowledge of Writing items at each grade band followed a normal distribution; however, a subtle difference between the depth of knowledge of items and standards was apparent. This difference was most apparent at the high school level with 63% of the items rated as a "2" or "3" (average across all 3 raters), while only 37.5% of the standards were rated as "2" or "3." Again, the difference was in the number of standards rated as "extended thinking" as compared to the number of items rated as such.

Mathematics: Elementary

Table 3.19. Strength of Link Between Mathematics Items and Standards

% of Items							
	Rater 1	Rater 2	Rater 3	Consensus			
Not Linked	6.8	26.1	10.9	6.4			
Vaguely Linked	17.9	28.9	16.6	10.6			
Clearly Linked	75.4	45.0	72.5	83.0			

Table 3.20. Item Depth of Knowledge Ratings

	% of Items			
	Rater 1	Rater 2	Rater 3	Consensus
Recognition and Reproduction (1)	18.9	18.9	19.8	45.0
Skill and Concept (2)	57.8	57.8	57.1	52.5
Strategic Thinking (3)	23.3	23.3	23.1	2.5
Extended Thinking (4)	0	0	0	0

Table 3.21. Standard Depth of Knowledge Ratings

	Rater 1	Rater 2	Rater 3	Consensus
Recognition and Reproduction (1)	6.2	4.2	6.6	46.8
Skill and Concept (2)	58.3	47.6	47.4	40.4
Strategic Thinking (3)	25.6	34.4	37.4	8.5
Extended Thinking (4)	10.0	13.7	8.5	4.3

Mathematics: Middle

Table 3.22. Strength of Link Between Mathematics Items and Standards

% of Items							
	Rater 1	Rater 2	Rater 3	Consensus			
Not Linked	12.8	8.5	16.7	12.0			
Vaguely Linked	25.5	12.3	9.4	28.0			
Clearly Linked	61.7	79.1	73.9	60.0			

Table 3.23. Item Depth of Knowledge Ratings

	% of Items			
	Rater 1	Rater 2	Rater 3	Consensus
Recognition and Reproduction (1)	0	4.3	0	0
Skill and Concept (2)	35.5	52.1	60.6	57.1
Strategic Thinking (3)	48.4	41.5	39.4	42.9
Extended Thinking (4)	16.1	2.1	0	0

Table 3.24. Standard Depth of Knowledge Ratings

	Rater 1	Rater 2	Rater 3	Consensus
Recognition and Reproduction (1)	.4	0	0	0
Skill and Concept (2)	10.3	21.3	20.0	20.0
Strategic Thinking (3)	44.4	43.4	43.4	52.0
Extended Thinking (4)	44.9	35.3	36.6	28.0

Mathematics: High

Table 3.25. Strength of Link Between Mathematics Items and Standards

% of Items							
	Rater 1	Rater 2	Rater 3	Consensus			
Not Linked	1.5	26.5	4.0	0			
Vaguely Linked	33.7	33.8	46.8	66.7			
Clearly Linked	64.9	39.7	49.3	33.3			

Table 3.26. Item Depth of Knowledge Ratings

	% of Items			
	Rater 1	Rater 2	Rater 3	Consensus
Recognition and Reproduction (1)	3.4	4.5	4.7	0
Skill and Concept (2)	49.4	39.3	43.0	71.4
Strategic Thinking (3)	41.6	56.2	52.3	28.6
Extended Thinking (4)	5.6	0	0	0

Table 3.27. Standard Depth of Knowledge Ratings

	Rater 1	Rater 2	Rater 3	Consensus
Recognition and Reproduction (1)	1.0	1.0	1.0	0
Skill and Concept (2)	4.4	7.4	8.4	38.9
Strategic Thinking (3)	60.5	58.8	55.4	50.0
Extended Thinking (4)	34.1	32.8	35.1	11.1

Extended Mathematics Linkage

Exact agreement across raters also was calculated as it provided data on every item while the consensus scores provided data on select items interspersed throughout the workshop. In Mathematics, the Elementary group was in **exact** agreement a little less than 70% of the time on Standard depth of knowledge, 100% of the time on Item depth of knowledge, and an average of 60% on the strength of the linkage between Item and Standard. At Middle School, pairs of raters were in **exact** agreement an average of 55% of the time on Standard depth of knowledge, approximately 65% of the time on Item depth of knowledge, and a little less than 70% of the time on the strength of linkage between Item and Standard. Finally, at high school, pairs of raters reached **exact** agreement 80% of the time on Standard depth of knowledge, 65% of the time on Item depth of knowledge, 100% of the time on Item depth of knowledge, 65% of the linkage between Item and Standard.

As the tables above suggest, raters agreed that test items on the Extended Mathematics Assessments were linked closely to the grade-level content standards they were designed to measure. This linkage was strongest at the Elementary level where approximately 80% of the items were rated as linked to standards with little reduction in depth and complexity. These findings are supported by the fact that students in grades 3, 4, and 5 are learning basic skills and thus the linkage between skills tested in the Extended Assessment and skills taught at those grade levels should be more closely aligned than those items in the upper grades. The percentage of items as rated clearly linked in the middle and high school grade bands drops to slightly more than 60% with more items being rated as vaguely linked with moderate reduction in depth or cognitive complexity of the content.

One consistent pattern across all grade bands in Mathematics is the subtle but consistent difference between the depth of knowledge ratings for items versus the standards with which they are aligned. Generally, more items were rated as "recognition and reproduction " or "1" than were standards and more standards were rated as "extended thinking" or "4" than items. Again, at the elementary level this is less apparent but is more apparent at middle and high school levels, with approximately 90% of the items being rated as a "2" or a "3" while a similar percentage of standards were rated as a "3" or a "4." Because some reduction in depth and cognitive complexity is expected on alternate assessment items, this overlap of items and standards "in the middle" represents a positive finding. Finally, those items that were rated by the entire group (consensus) are not synthesized in this section due to the limited sample; consensus ratings primarily occurred to ensure score reliability across members of each scoring team.

Science: Elementary

Table 3.28. Strength of Link Between Science Items and Standards

% of Items							
	Rater 1	Rater 2	Rater 3	Consensus			
Not Linked	0	1.4	4.3	-			
Vaguely Linked	12.7	8.5	8.7	-			
Clearly Linked	87.3	90.1	87.0	-			

Table 3.29. Item Depth of Knowledge Ratings

	% of Items		D	
	Kater I	Kater 2	Rater 3	Consensus
Recognition and Reproduction (1)	4.0	4.0	11.8	-
Skill and Concept (2)	50.0	40.0	47.1	-
Strategic Thinking (3)	40.0	52.0	41.2	-
Extended Thinking (4)	6.0	4.0	0	-

Table3.30. Standard Depth of Knowledge Ratings

	Rater 1	Rater 2	Rater 3	Consensus
Recognition and Reproduction (1)	5.6	8.5	0	-
Skill and Concept (2)	60.6	53.5	65.2	-
Strategic Thinking (3)	16.9	15.5	17.4	-
Extended Thinking (4)	16.9	22.5	17.4	-

Science Middle

Table 3.31. Strength of Link Between Science Items and Standards

% of Items								
	Rater 1	Rater 2	Rater 3	Consensus				
Not Linked	8.5	0	0	-				
Vaguely Linked	33.9	27.1	29.4	-				
Clearly Linked	57.6	72.9	70.6	-				

Table 3.32. Item Depth of Knowledge Ratings

	% of Items			
	Rater 1	Rater 2	Rater 3	Consensus
Recognition and Reproduction (1)	0	0	0	-
Skill and Concept (2)	44.0	46.0	66.7	-
Strategic Thinking (3)	54.0	54.0	33.3	-
Extended Thinking (4)	2.0	0	0	-

Table 3.33. Standard Depth of Knowledge Ratings

	Rater 1	Rater 2	Rater 3	Consensus
Recognition and Reproduction (1)	0	0	0	-
Skill and Concept (2)	40.7	35.6	52.9	-
Strategic Thinking (3)	57.6	64.4	47.1	-
Extended Thinking (4)	1.7	0	0	-

Science: High

Table 3.34 Strength of Link Between Science Items and Standards

% of Items								
	Rater 1	Rater 2	Rater 3	Consensus				
NotLinked	8.5	0	0	-				
Vaguely Linked	33.9	27.1	29.4	-				
Clearly Linked	57.6	72.9	70.6	-				

Table 3.35. Item Depth of Knowledge Ratings

	% of Items			
	Rater 1	Rater 2	Rater 3	Consensus
Recognition and Reproduction (1)	0	0	0	-
Skill and Concept (2)	44.0	46.0	66.7	-
Strategic Thinking (3)	54.0	54.0	33.3	-
Extended Thinking (4)	2.0	0	0	-

Table 3.36. Standard Depth of Knowledge Ratings

	Rater 1	Rater 2	Rater 3	Consensus
Recognition and Reproduction (1)	0	0	0	-
Skill and Concept (2)	40.7	35.6	52.9	-
Strategic Thinking (3)	57.6	64.4	47.1	-
Extended Thinking (4)	1.7	0	0	-

Extended Science Linkage

The Elementary Science group recorded **exact** agreement 90% of the time on Standard depth of knowledge, 85% of the time on Item depth of knowledge, and an average of 85% on the strength of the linkage between Item and Standard. At Middle School, pairs of raters came to **exact** agreement approximately 75% of the time on Standard depth of knowledge, approximately 81% of the time on Item depth of knowledge, and a little more than 72% of the time on the strength of linkage between Item and Standard. Finally, at high school, pairs of raters reached **exact** agreement approximately 75% of the time on Standard depth of knowledge, 81% of the time on Item depth of knowledge, and a naverage of 72% of the time on the strength of the linkage between Item and Standard.

Approximately 6% of the items were rated as "not linked" across all three raters with the remaining 94% of the items rated as "moderately linked" or "clearly linked." Again, this confirmatory analysis provides validation to the alignment of the test items with grade level content standards. Unlike the previous two content areas, a different pattern emerged in Science. The greatest difference between item depth of knowledge and standard depth of knowledge occurred at the elementary level, with the standards being rated as requiring "extended thinking" approximately 20% of the time while the items were rated as requiring "extended thinking" less than 5% of the time. This discrepancy was more apparent across upper grade bands in the previous two content areas and less apparent at elementary level. Moreover, at middle and high school, almost 100% of the items and the standards were rated as a "2" or a "3." No difference was found in the ratings for level of cognitive complexity across items or standards at the middle and high school levels, and very few items or standards were rated as a "4."

Refer to Appendix 3_1 Alignment Study Results and Data

3.4.3 Test Outcomes

In this section, data are presented on participation in each grade level to provide a base rate for analyzing performance. In addition, score values are presented after converting Not Administered – Inappropriate to missing and all other administration types to 0 (including items left blank, items apparently not tested, items refused by the student, and items deemed too difficult by the assessor). Note that in the last analysis of each subject area, Levels of Independence include all blanks as 0 (essentially missing values).

Reading

Prerequisite Skills (Task 1) had a range from 0 to 40 points in most grades. All other (content) tasks ranged from 0 to 10 points.

Between 2,698 and 3,028 students took the various tasks on the **Elementary** School grades test. The average summed total for Pre-requisite Skills was very high (only 4 points from the maximum) and the standard deviation was quite low (only about 6 points or below .20 of the mean). Scores for most content tasks were around 6 or 7 points (sum total) with one task just above 8 (Task 6). The average variation (standard deviation) also was quite consistent – just under 3 points.

Between 1,456 and 1,740 students took the various tasks on the **Middle** School grades test. The average for Pre-requisite Skills was very high (only 4 points from the maximum) and the standard deviation was quite low (only about 7 points or .20 of the mean). All content tasks were around 6 or 7 points. The average variation (standard deviation) also was quite consistent – at about 3 points.

Between 364 and 476 students took the various tasks on the **High** School grades test. The average for Prerequisite Skills was very high (just above 5 points from the maximum) and the standard deviation was quite low (at about 8.6 points or below .25 of the mean). Most content tasks were around 6 or 7 points with one task just below 6 (task 3). The average variation (standard deviation) also was quite consistent – about 3 points.

Grade 3. Between 989 and 1,087 grade 3 students took the various tasks on the Elementary test. The average for Prerequisite Skills was very high (only 4 points from the maximum) and the standard deviation was quite low (below 6 points or below .20 of the mean). All content tasks were around 6 or 7 points. The average variation (standard deviation) also was quite consistent – just under 3 points.

Grade 4. Between 910 and 1,026 grade 4 students took the various tasks on the Elementary test. The average for Prerequisite Skills was very high (only 4 points from the maximum) and the standard deviation was quite low (below 7 points or below .20 of the mean). All content tasks were around 6 or 7 points with two tasks just above 8 points (tasks 6 and 7). The average variation (standard deviation) also was quite consistent – just under 3 points.

Grade 5. Between 752 and 852 grade 5 students took the various tasks on the Elementary test. The average for Prerequisite Skills was very high (only 4 points from the maximum) and the standard deviation was quite low (about 6 points or below .20 of the mean). All content tasks were around 6 or 7 points with two tasks above 8 (tasks 6 and 7). The average variation (standard deviation) also was quite consistent – just under 3 points.

Grade 6. Between 567 and 658 grade 6 students took the various tasks on the Middle School test. The average for Prerequisite Skills was very high (only 4 points from the maximum) and the standard deviation was quite low (below 7 points or below .20 of the mean). All content tasks were around 6 or 7 points. The average variation (standard deviation) also was quite consistent – at about 3 points.

Grade 7. Between 449 and 551 grade 7 students took the various tasks on the Middle School test. The average for Prerequisite Skills was very high (only 4 points from the maximum) and the standard deviation was quite low (about 7 points or .20 of the mean). All content tasks were around 6 or 7 points. The average variation (standard deviation) also was quite consistent – at about 3 points.

Grade 8. Between 410 and 499 grade 8 students took the various tasks on the Middle School test. Prerequisite Skills (task 1) had a range from 4 to 40 points while all other tasks ranged from 0 to 10 points. The average for Prerequisite Skills was very high (only 4 points from the maximum) and the standard deviation was quite low (about 7 points or .20 of the mean). All content tasks were around 6 or 7 points. The average variation (standard deviation) also was quite consistent – at about 3 points.

Grade 10. Between 343 and 443 grade 10 students took the various tasks on the High School test. The average for Prerequisite Skills was high (about 5 points from the maximum) and the standard deviation was low (at about 8 points or .25 of the mean). All content tasks were around 6 or 7 points. The average variation (standard deviation) also was quite consistent – about 3 points.

Writing

Prerequisite Skills (Task 1) had a range from 0 to 40 points in grade 4 with all other grades showing a more restricted range; all other content tasks ranged from 0 to 10 points.

Between 765 and 1,014 students took the various tasks on the **Elementary** grades test. The average for Prerequisite Skills was very high (only 3 points from the maximum) and the standard deviation was low (about 9 points or less than .25 of the mean). Most content tasks were around 6 or 7 points with two tasks between 4 and 5 (tasks 7 and 8) and two tasks below 4 (tasks 9 and 10). The average variation (standard deviation) also was quite consistent – about 3 points.

Between 436 and 589 students took the various tasks on the **Middle** School grades test. Prerequisite Skills (task 1) had a range from 5 to 40 points while all other tasks ranged from 0 to 10 points. The average for Prerequisite Skills was very high (only 3 points from the maximum) and the standard deviation was low (about 9 points or .25 of the mean). Most content tasks were around 4 to 6 points with one task below 4 (task 6). The average variation (standard deviation) also was quite consistent – about 3.5 points.

Between 354 and 489 students took the various tasks on the **High** School grades test. The average for Prerequisite Skills was very high (just over 3 points from the maximum) and the standard deviation was low (about 10 points or less than .3 of the mean). Most content tasks were around 4 to 6 points with one task above 7 (task 5). The average variation (standard deviation) also was quite consistent – about 3.5 points.

Grade 4. Between 713 and 938 grade 4 students took the various tasks on the Elementary test. The average for Prerequisite Skills was very high (only 3 points from the maximum) and the standard deviation was low (about 9 points or less than .25 of the mean). Most content tasks were around 4 to 6 points with two tasks above 7 (tasks 2 and 5) and two tasks below 4 (tasks 9 and 10). The average variation (standard deviation) also was quite consistent – about 3 points.

Grade 7. Between 388 and 529 grade 7 students took the various tasks on the Middle School test. Prerequisite Skills (task 1) had a range from 5 to 40 points while all other tasks ranged from 0 to 10 points. The average for Prerequisite Skills was very high (only 3 points from the maximum) and the standard deviation was low (about 9 points or .25 of the mean). Most content tasks were around 4 to 6 points with one task below 4 (task 6). The average variation (standard deviation) also was quite consistent – about 3.5 points.

Grade 10. Between 333 and 451 grade 10 students took the various tasks on the High School test. The average for Prerequisite Skills was very high (just 3 points from the maximum) and the standard deviation was low (about 10 or less than .3 of the mean). Most content tasks were around 4 to 6 points with one task above 7 (task 5). The average variation (standard deviation) also was quite consistent – about 3.5 points.

Mathematics

Prerequisite Skills (task 1) had a range from 0 to 40 points (except grades 9 and 11) while all other tasks ranged from 0 to 10 points.

Between 2,044 and 2,430 students took the various tasks on the **Elementary** School grades test. The average for Prerequisite Skills was very high (only 4 points from the maximum) and the standard deviation was quite low (only about 7 points or about .20 of the mean). Most content tasks were around 4 or 5 points with one task below 4 (task 3) and one task above 6 (task 7). The average variation (standard deviation) also was quite consistent – just under 3 points.

Between 1,300 and 1,675 students took the various tasks on the **Middle** School grades test. The average for Prerequisite Skills was very high (only 4 points from the maximum) and the standard deviation was quite low (only about 7 points or about .20 of the mean). Most content tasks were around 4 or 5 points with four tasks below 4 (tasks 2, 3, 4, and 6). The average variation (standard deviation) also was quite consistent – just under 3 points.

Between 358 and 478 students took the various tasks on the **High** School grades test. The average for Prerequisite Skills was very high (only 5 points from the maximum) and the standard deviation was quite low (only about 9 points or about .25 of the mean). Most content tasks were around 4 or 5 points with two tasks below 4 (tasks 3 and 8). The average variation (standard deviation) also was quite consistent – at about 3 points.

Grade 3. Between 717 and 828 grade 3 students took the various tasks on the Elementary test. The average for Prerequisite Skills was very high (only 4 points from the maximum) and the standard deviation was quite low (only about 6.5 points or less than .20 of the mean). Most content tasks were around 4 or 5 points with two tasks below 4 (tasks 3 and 11) and one task above 6 (task 7). The average variation (standard deviation) also was quite consistent – just under 3 points.

Grade 4. Between 698 and 833 grade 4 students took the various tasks on the Elementary test. The average for Prerequisite Skills was very high (only 4 points from the maximum) and the standard deviation was quite low (only about 7 points or about .20 of the mean). Most content tasks were around 4 or 5 points with one task below 4 (task 3) and one task above 6 (task 7). The average variation (standard deviation) also was quite consistent – just under 3 points.

Grade 5. Between 717 and 828 grade 5 students took the various tasks on the Elementary test. The average for Prerequisite Skills was very high (just over 3 points from the maximum) and the standard deviation was quite low (less than 7 points or less than .20 of the mean). Most content tasks were around 4, 5, or 6 points with one task just below 4 (task 3). The average variation (standard deviation) also was quite consistent – just under 3 points.

Grade 6. Between 484 and 606 grade 6 students took the various tasks on the Middle School test. The average for Prerequisite Skills was very high (about 4 points from the maximum) and the standard deviation was quite low (about 7 points or .20 of the mean). Most content tasks were around 4 or 5 points with three tasks between 3 and 4 (tasks 2, 3, and 4) and one task just below 3 (task 3). The average variation (standard deviation) also was quite consistent – just under 3 points.

Grade 7. Between 413 and 545 grade 7 students took the various tasks on the Middle School test. The average for Prerequisite Skills was very high (about 4 points from the maximum) and the standard deviation was quite low (about 7 points or .20 of the mean). Most content tasks were around 4 or 5 points with three tasks under 4 (tasks 2, 3, and 4). The average variation (standard deviation) also was quite consistent – just under 3 points.

Grade 8. Between 371 and 486 grade 8 students took the various tasks on the Middle School test. The average for Prerequisite Skills was very high (about 4 points from the maximum) and the standard deviation was quite low (about 7 points or .20 of the mean). Most content tasks were around 4 or 5 points with three tasks between 3 and 4 (tasks 2, 4, and 6) and one task just below 3 (task 3). The average variation (standard deviation) also was quite consistent – just under 3 points.

Grade 10. Between 339 and 448 grade 10 students took the various tasks on the High School test. The average for Prerequisite Skills was very high (about 4 points from the maximum) and the standard deviation was very low (about 8 points or under .25 of the mean). Most content tasks were around 4 or 5 points with one task under 4 (task 3). The average variation (standard deviation) also was quite consistent – at about 3 points.

Science

Prerequisite Skills (task 1) had a range from 0 to 40 points (grades 5, 8, and 10) with all other grades showing less range; all other content tasks ranged from 0 to 10 points.

Between 525 and 612 students took the various tasks on the **Elementary** School grades test. The average for Prerequisite Skills was very high (only 3 points from the maximum) and the standard deviation was quite low (about 7 points or less than .20 of the mean). Most content tasks were around 6 or 7 points with two tasks above 8 (tasks 5 and 6). The average variation (standard deviation) also was quite consistent – just under 3 points.

Between 430 and 519 students took the various tasks on the **Middle** School grades test. The average for Prerequisite Skills was very high (only 4 points from the maximum) and the standard deviation was quite low (under 8 points or under .25 of the mean). Most content tasks were around 5 or 6 points with one task above 7 (task 8). The average variation (standard deviation) also was quite consistent – about 3 points.

Between 359 and 465 students took the various tasks on the **High** School grades School test. The average for Prerequisite Skills was very high (only 4 points from the maximum) and the standard deviation was quite low (around 8 points, or under .25 of the mean). Most content tasks were around 5 or 6 points with one task below 5 (task 10). The average variation (standard deviation) also was quite consistent – about 3 points.

Grade 5. Between 502 and 579 grade 5 students took the various tasks on the Elementary test. The average for Prerequisite Skills was very high (only 3 points from the maximum) and the standard deviation was low (about 7 points or just under .20 of the mean). All content tasks were around 6 or 7 points with two tasks over 8 (tasks 5 and 6). The average variation (standard deviation) stayed quite consistent - just under 3 points.

Grade 8. Between 378 and 457 grade 8 students took the various tasks on the Middle School test. The average for Prerequisite Skills was very high (only 3 points from the maximum) and the standard deviation was low (about 7 points or under .20 of the mean). All content tasks were around 5 or 6 points with two tasks just above 7 (tasks 8 and 9). The variation (standard deviation) stayed quite consistent – about 3 points.

Grade 10. Between 336 and 432 grade 10 students took the various tasks on the High School test. The average for Prerequisite Skills was very high (only 4 points from the maximum) and the standard deviation was low (about 8 points or under .25 of the mean). All content tasks were around 4 to 6 points. The average variation (standard deviation) stayed quite consistent – about 3 points.

Refer to Appendix 3_2Descriptive Statistics by Subject

3.5. RELIABILITY

With an assessment consisting of items measuring the same construct or tapping the content standards in the same subject area (like reading or mathematics), it is expected that these items show some level of consistency among themselves. In other words, it is desirable that student responses to various items or tasks have some level of correspondence with one another, and do not contradict each other in any substantial way.

Many authors, such as Geisinger (1994)⁹, have noted major measurement issues when students are assessed by standardized tests that have been administered under non-standard conditions. By adhering to standard procedures, errors in scores can more likely be attributed to random or individual errors, rather than administrative errors, and scores can be interpreted similarly for all.

3.5.1 Internal Consistency – Test in Grade Bands and Grade Levels

We checked internal consistency by looking at Cronbach's alpha. A value of at least 0.90 was judged as sufficient for standardized tests. As noted in the data we present, all reliability coefficients exceed this level. Following are reliability coefficients for each task.

Grade	Reading	Writing	Mathematics	Science
Elementary	.96	.97	.94	.96
Middle	.97	.97	.93	.94
High	.98	.98	.95	.94
Grade	Reading	Writing	Mathematics	Science
3	.95	.97	.93	.94
4	.96	.97	.95	.97
5	.96	.98	.94	.95
6	.97	.94	.92	.96
7	.97	.97	.92	.91
8	.98	.97	.94	.95
10	.98	.98	.95	.95

Table 3.37.	Test Level	Reliabilities
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3.5.2 Item Inter-correlations – Tasks in Grade Bands

In this section, we report on the general difficulty of each task and describe the relation among the items comprising the task. For a task to add value in documenting performance, we expect performance to be in the middle range of difficulty (not too easy and not too difficult) and the items to be moderately related to each. In general, the tasks are appropriately difficult and internally consistent.

⁹ Geisinger, K. F. (1994). Psychometric issues in testing students with disabilities. *Applied Measurement in Education, 7,* 121-140.

Reading Reliability by Grade Band

The following task summaries are reported by *grade band* (refer to appendix 3_3a through 3_3d). Note that, in the appendix, all grade bands are sequenced within each task; however, to make the explanation easier to read, all tasks are sequenced within each grade band. This analysis also was done by grade level: See appendix 3_4a through 3_4d. Note also that, as these are item level correlations, ceiling or floor effects may be present that impact individual item range. As a result, the correlations presented below fall within the expected range.

Elementary School

Task 2 (Decoding and Word Recognition) had a mean just over 7 points with an average interitem correlation of .666 (ranging from .594 to .751).

Task 3 (Decoding and Reading Fluency) had a mean just over 7 points with an average inter-item correlation of .803 (ranging from .762 to .838).

Task 4 (Word Recognition and Vocabulary (prefixes/suffixes, dictionary usage)) had a mean just over 6.5 points, with one somewhat difficult item (item 5). The average inter-item correlation was .419 (ranging from .297 to .657).

Task 5 (Vocabulary (synonyms/antonyms, homophones, contextual clues)) had a mean just below 7.5 points with an average inter-item correlation of .280 (ranging from .202 to .393).

Task 6 (Read to Perform a Task (text feature), Informational Text: General Understanding (main idea, sequence of events, supporting details)) had a mean just over 8 points with an average interitem correlation of .369 (ranging from .326 to .434).

Task 7 (Literary Text: General Understanding (problem, supporting details), Interpretation (prediction)) had a mean just below 8 points with an average inter-item correlation of .378 (ranging from .298 to .467).

Task 8 (Informational Text: General Understanding (main idea, supporting details), Content and Structure (author's purpose)) had a mean just over 7 points with an average inter-item correlation of .397 (ranging from .334 to .555).

Task 9 (Literary Text: General Understanding (problem, supporting details), Interpretation (inference)) had a mean just under 7.5 with an average inter-item correlation of .363 (ranging from .302 to .400).

Task 10 (Read to Perform a Task (graphs, charts), Informational Text: Interpretation (inference)) had a mean just under 6.5, with one somewhat difficult item (item 5). The average inter-item correlation was .317 (ranging from .221 to .403).

Task 11 (Information Text: General Understanding (main idea, supporting details,) Interpretation (cause/effect, inferences)) had a mean just below 7 points with an average inter-item correlation of .397 (ranging from .325 to .568).

Middle School

Task 2 (Vocabulary (contextual clues, figurative language)) had a mean just below 7 points with an average inter-item correlation of .541 (ranging from .482 to .660).

Task 3 (Read to Perform a Task (locate and synthesize information)) had a mean close to 6.5 points with an average inter-item correlation of .684 (ranging from .633 to .737).

Task 4 (Read to Perform a Task (read directions, charts, and table; locate and synthesize information)) had a mean of 6.5 points, with one somewhat difficult item (item 4). The average inter-item correlation was .528 (ranging from .333 to .659).

Task 5 (Informational Text: Demonstrate General Understanding (main idea, supporting details), Develop an Interpretation (prediction)) had a mean just over 6 points with an average inter-item correlation of .489 (ranging from .383 to .646). This task is appropriately difficult and internally consistent.

Task 6 (Literary Text: Demonstrate General Understanding (main idea, supporting details), Develop an Interpretation (prediction)) had a mean just below 7 points with one somewhat difficult item (item 5). The average inter-item correlation was .442 (ranging from .329 to .557).

Task 7 (Literary Text: Demonstrate General Understanding (main idea, supporting details), Develop an Interpretation (characterization, prediction)) had a mean just below 7 points with an average inter-item correlation of .401 (ranging from .270 to .519).

Task 8 (Informational Text: Demonstrate General Understanding (supporting details), Develop an Interpretation (characterization, prediction)) had a mean just over 7 points with an average inter-item correlation of .478 (ranging from .366 to .598).

Task 9 (Literary Text: Demonstrate General Understanding (main idea, supporting details), Develop an Interpretation (theme, prediction)) had a mean just over 7.5 points with an average inter-item correlation of .461 (ranging from .372 to .535).

Task 10 (Literary Text: Demonstrate General Understanding (supporting details), Develop an Interpretation (characterization, inference)) had a mean just over 7 points with an average interitem correlation of .498 (ranging from .445 to .599).

Task 11 (Informational Text: Demonstrate General Understanding (facts), Develop an Interpretation (inference)) Examine Content and Structure (fact v. opinion) had a mean just over 6.5, with one somewhat difficult item (item 3). The average inter-item correlation was .457 (ranging from .347 to .580).

High School

Task 2 (Vocabulary (contextual clues, figurative language, connotation)) had a mean just over 6 points, with one difficult item (item 2). The average inter-item correlation was .508 (ranging from .280 to .753).

Task 3 (Read to Perform a Task (locate and synthesize information)) had a mean just under 6 points with one somewhat difficult item (item 5). The average inter-item correlation was .736 (ranging from .697 to .797).

Task 4 (Read to Perform a Task (read charts and tables, locate and synthesize information)) had a mean just over 6.5 points, with one somewhat difficult item (item 4). The average inter-item correlation was .683 (ranging from .590 to .786).

Task 5 (Informational Text: Demonstrate General Understanding (main idea), Develop an Interpretation (prediction)) had a mean just over 6 points with an average inter-item correlation of .586 (ranging from .534 to .691).

Task 6 (Literary Text: Demonstrate General Understanding (main idea, supporting details) Develop an Interpretation (prediction)) had a mean just under 7 points with one somewhat difficult item (item 5). The average inter-item correlation was .522 (ranging from .377 to .650).

Task 7 (Literary Text: Demonstrate General Understanding (main idea, supporting details), Develop an Interpretation (character interactions, prediction), Examine Content and Structure (dialogue)) had a mean just below 7 points, with one difficult item (item 5). The average interitem correlation was .486 (ranging from .363 to .601).

Task 8 (Informational Text: Demonstrate General Understanding (sequence of events, supporting details), Develop an Interpretation (inference), Examine Content and Structure (author's purpose)) had a mean just over 7.5 points with an average inter-item correlation of .531 (ranging from .465 to .655).

Task 9 (Literary Text: Demonstrate General Understanding (main idea, supporting details), Develop an Interpretation (theme)) had a mean just over 7 points with an average inter-item correlation of .588 (ranging from .506 to .699).

Task 10 (Literary Text: Demonstrate General Understanding (supporting details), Develop an Interpretation (inference, analysis)) had a mean just below 6.5 points with an average inter-item correlation of .509 (ranging from .456 to .575).

Task 11 (Informational Text: Demonstrate General Understanding (facts), Develop an Interpretation (inference), Examine Content and Structure (fact vs. opinion)) had a mean just over 6 points with an average inter-item correlation of .513 (ranging from .346 to .693).

Writing Reliability by Grade Band

Elementary School

Task 2 (Handwriting and Spelling) had a mean of 7 points with an average inter-item correlation of .75 (ranging from .65 to .86).

Task 3 (Writing Sentences) had a mean of 6.7 points with an average inter-item correlation of .82 (ranging from .75 to .85).

Task 4 (General Conventions) had a mean of 6.3 points with one item rather difficult (item 3) and an average inter-item correlation of .40 (ranging from .19 to .77).

Task 5 (Grammar) had a mean of 7.3 points with an average inter-item correlation of .54 (ranging from .40 to .65).

Task 6 (Punctuation) had a mean of 6 points with one slightly difficult item (item 1) and an average inter-item correlation of .42 (ranging from .29 to .57).

Task 7 (Purpose and Style) had a mean of 5 points with all five items slightly difficult and an average inter-item correlation of .40 (ranging from .27 to .47).

Task 8 (Narrative Writing) had a mean of 4.6 points with four slightly difficult items (items 2, 3, 4, and 5) and an average inter-item correlation of .67 (ranging from .64 to .72).

Task 9 (Persuasive Writing) had a mean of 3.4 points with two slightly difficult items (items 1 and 2), three quite difficult items (items 3, 4, and 5) and an average inter-item correlation of .59 (ranging from .49 to .72).

Task 10 (Research Writing) had a mean of 3 points with all items quite difficult and an average inter-item correlation of .59 (ranging from .48 to .73).

Task 11 (Letter Writing) had a mean of 6.6 points with an average inter-item correlation of .59 (ranging from .55 to .65).

Middle School

Task 2 (Handwriting and Spelling) had a mean of 6.8 points with an average inter-item correlation of .88 (ranging from .84 to .92).

Task 3 (General Conventions) had a mean of 6 points with an average inter-item correlation of .51 (ranging from .37 to .83).

Task 4 (Grammar and Punctuation) had a mean of 6.5 points with an average inter-item correlation of .56 (ranging from .46 to .70).

Task 5 (General Composition) had a mean of 6.9 points with an average inter-item correlation of .48 (ranging from .35 to .73).

Task 6 (Purpose and Style) had a mean of 3.9 points with all five items rather difficult and an average inter-item correlation of .39 (ranging from .30 to .48).

Task 7 (Narrative Writing) had a mean of 5.7 points with an average inter-item correlation of .64 (ranging from .57 to .69).

Task 8 (Persuasive Writing) had a mean of 4.9 points with three items slightly difficult (items 3, 4, and 5) and an average inter-item correlation of .67 (ranging from .64 to .72).

Task 9 (Research Writing) had a mean of 5 points with all items slightly difficult and an average inter-item correlation of .64 (ranging from .55 to .74).

Task 10 (Summary and Job Application) had a mean of 6 points with one item slightly difficult (item 4) and an average inter-item correlation of .51 (ranging from .39 to .61).

Task 11 (Letter Writing) had a mean of 6.1 points with an average inter-item correlation of .64 (ranging from .54 to .75).

High School

Task 2 (Handwriting and Spelling) had a mean of 6.8 points with an average inter-item correlation of .87 (ranging from .81 to .92).

Task 3 (General Conventions) had a mean of 5.5 points with one item somewhat difficult (item 2) and an average inter-item correlation of .66 (ranging from .61 to .73).

Task 4 (Grammar and Punctuation) had a mean of 5.6 points with one rather difficult item (item 4) an average inter-item correlation of .51 (ranging from .38 to .68).

Task 5 (General Composition) had a mean of 7.2 points with an average inter-item correlation of .62 (ranging from .55 to .72).

Task 6 (Purpose and Style) had a mean of 4.5 points with all five items rather difficult, and an average inter-item correlation of .55 (ranging from .49 to .63).

Task 7 (Narrative Writing) had a mean of 6 points with an average inter-item correlation of .78 (ranging from .73 to .84).

Task 8 (Persuasive Writing) had a mean of 4.7 points with three slightly difficult items (items 3, 4, and 5) and an average inter-item correlation of .68 (ranging from .62 to .77).

Task 9 (Research Writing) had a mean of 5.5 points with one rather difficult item (item 5) and an average inter-item correlation of .66 (ranging from .57 to .78).

Task 10 (Summary and Job Application) had a mean of 6.6 points with an average inter-item correlation of .61 (ranging from .59 to .80).

Task 11 (Letter Writing) had a mean of 6.8 points with an average inter-item correlation of .64 (ranging from .55 to .77).

Mathematics Reliability by Grade Band

Elementary School

Task 2 (Numbers) had a mean close to 4.5 points, with three difficult items, (items 1, 3 and 5) and one very difficult item (item 2). The mean inter-item correlation was .297 (ranging from .235 to .427).

Task 3 (Computation) had a mean just below 3.5 points with two very difficult items (items 2 and 3) and two extremely difficult items (items 1 and 5). The average inter-item correlation was .235 (ranging from .098 to .484). The task is rather difficult, but internally consistent, with the exception of item 1.

Task 4 (Measurement: Time/Temperature/Length/Area) had a mean just over 5 points, with two difficult items (items 2 and 5). The mean inter-item correlation was .267 (ranging from .119 to .462).

Task 5 (Geometry/Shapes) had a mean just below 6 points, with two difficult items (items 3 and 4). The mean inter-item correlation was .280 (ranging from .234 to .323).

Task 6 (Measurement: Weight/Height/Volume) had a mean close to 5.5 points, with one rather difficult item (item 5) and one very difficult item (item 2). The average inter-item correlation was .229 (ranging from .046 to .407).

Task 7 (Interpret Data and Graphs) had a mean just over 6 points, with two difficult items (items 3 and 5). The average inter-item correlation was .291 (ranging from .283 to .269).

Task 8 (Applications) had a mean just over 5 points, with two very difficult items (items 2 and 4). The average inter-item correlation was .404 (ranging from .315 to .475).

Task 9 (Fractions/Decimals/Number Line) had a mean just below 5 points, with two difficult items (items 2 and 3) and two very difficult items (items 4 and 5). The average inter-item correlation was .272 (ranging from .198 to .385).

Task 10 (Probabilities and Predictions) had a mean just over 5 points, with four difficult items (items 1, 3, 4 and 5). The average inter-item correlation was .339 (ranging from .285 to .401).

Task 11 (Algebra/Unknown Quantities) had a mean just over 4 points, with two difficult items (items 1 and 2) and two very difficult items (items 3 and 5). The average inter-item correlation was .316 (ranging from .192 to .436).

Middle School

Task 2 (Calculations: Numbers, Percents, Fractions and Number Lines) had a mean just below 3.5 points, with three difficult items (items 1, 2 and 5) and two extremely difficult items (items 3 and 4). The average inter-item correlation was .271 (ranging from .155 to .448). The task is relatively difficult, but internally consistent.

Task 3 (Calculations: Computations and Operations) had a mean just below 3 points, with one difficult item (item 5) three very difficult items (items 2, 3 and 4), and one extremely difficult

item (item 1). The average inter-item correlation was .188 (ranging from .095 to .293). The task is relatively difficult, but internally consistent, with the exception of item 1.

Task 4 (Statistics and Probability) had a mean just below 4 points, with four difficult items (items 1, 2, 3 and 5) and one extremely difficult item (item 1). The average inter-item correlation was .263 (ranging from .143 to .400). The task is relatively difficult, but internally consistent, with the exception of item 1.

Task 5 (Statistics: Collect and Display Data) had a mean just below 5 points, with two rather difficult items (items 4 and 5) and one very difficult item (item 2). The average inter-item correlation was .349 (ranging from .288 to .415).

Task 6 (Algebraic Relationships) had a mean just below 4 points. Item 2 was rather difficult, and all other items were very difficult. The average inter-item correlation was .245 (ranging from .186 to .306). The task is relatively difficult, but internally consistent.

Task 7 (Measurement: Units, Conversions and Rates) had a mean just over 4 points, with two difficult items (items 1 and 5) and two very difficult items (items 3 and 4). The average interitem correlation was .189 (ranging from -.020 to .343). The task is relatively difficult, but internally consistent, with the exception of item 4.

Task 8 (Measurement: Shapes, Angles and Area) had a mean close to 4.5, with two difficult items (items 1 and 4), one very difficult item, (item 5) and one extremely difficult item, (item 3). The average inter-item correlation was .217 (ranging from .108 to .374). The task is relatively difficult, but internally consistent with the exception of item 3.

Task 9 (Geometry: Angles and Properties) had a mean just over 4 points, with one difficult item (item 2) and three very difficult items (items 3, 4 and 5). The average inter-item correlation was .221 (ranging from .131 to .411). The task is relatively difficult, but internally consistent.

Task 10 (Geometry: Lines and Shapes) had a mean just over 4.5 points, with three difficult items (items 2, 3 and 4) and one extremely difficult item (item 5). The average inter-item correlation was .210 (ranging from .080 to .306).

Task 11 (Geometry: Reflections, Transformations and Missing Components) had a mean just below 5.5 points, with one difficult item (item 5) and one very difficult item (item 4). The average inter-item correlation was .281 (ranging from .186 to .391).

High School

Task 2 (Computations and Calculations: Numbers/Estimation/Area) had a mean just over 4.5 points, with four difficult items (items 1, 2, 3 and 4) and one extremely difficult item (item 5). The average inter-item correlation was. 410 (ranging from .289 to .561).

Task 3 (Computations and Calculations: Properties/Operations/Equivalence) had a mean just over 3 points, with two difficult items (items 1 and 2) and three extremely difficult items (items 3, 4 and 5). The average inter-item correlation was .256 (ranging from .142 to .372). The task is relatively difficult, but internally consistent.

Task 4 (Geometry: Shapes/Properties) had a mean just below 6 points, with two difficult items (items 1 and 4). The average inter-item correlation was .360 (ranging from .238 to .603).

Task 5 (Statistical Measures and Probabilities) had a mean just below 5 points, with one difficult item (item 2) and one extremely difficult item (item 1). The average inter-item correlation was .366 (ranging from .232 to .494).

Task 6 (Probability (Representation) and Algebra (Patterns)) had a mean just over 5 points, with two difficult items (item 2 and item 5). The average inter-item correlation was .446 (ranging from .301 to .537).

Task 7 (Algebra: Variables/Equations/Relationships) had a mean just over 4 points, with three difficult items (items 1, 2 and 5) and one extremely difficult item (item 3). The average interitem correlation was .263 (ranging from .145 to .427). The task is relatively difficult and internally consistent, with the exception of item 3.

Task 8 (Algebra: Graphing/Change/Distance) had a mean just below 4 points, with one difficult item (item 4) and three very difficult items (items 2, 3 and 5). The average inter-item correlation was .252 (ranging from .165 to .349).

Task 9 (Measurement: Units/Conversion/Formulas) had a mean just below 5 points, with all items being somewhat difficult. The average inter-item correlation was .371 (ranging from .269 to .422).

Task 10 (Geometry: Properties/Planes/Lines) had a mean just over 4.5, with all items being somewhat difficult. The average inter-item correlation was .386 (ranging from .291 to .480).

Task 11 (Geometry: Transformations/Symmetry/Coordinates) had a mean just over 4.5 points, with all items being somewhat difficult. The average inter-item correlation was .346 (ranging from .168 to .358).

Science Reliability by Grade Band

Elementary School

Task 2 (Structure and Properties of Matter) had a mean of 7.5 points with one item slightly more difficult (item 3) and an average inter-item correlation of .42 (ranging from .38 to .60).

Task 3 (Chemical and Physical Changes) had a mean of 6.8 points with two items very slightly more difficult (items 4 and 5) than the others, and an average inter-item correlation of .52 (ranging from .45 to .52).

Task 4 (Fundamental Forces and Motions) had a mean of 7.8 points with an average inter-item correlation of .41 (ranging from .35 to .47).

Task 5 (Interaction of Energy and Matter) had a mean of 8.2 points with an average inter-item correlation of .43 (ranging from .32 to .55).

Task 6 (Organism Characteristics and Needs) had a mean of 8.1 points and an average inter-item correlation of .45 (ranging from .38 to .58).

Task 7 (Classification, Life Cycle) had a mean of 7.5 points with an average inter-item correlation of .38 (ranging from .27 to .61).

Task 8 (Interdependence of Organisms in the Environment) had a mean of 6.5 points with one quite difficult item (item 4) and an average inter-item correlation of .30 (ranging from .09 to .34). Except for one item (item 4),

Task 9 (Survival, Structure, Function) had a mean of 7.8 points with an average inter-item correlation of .44 (ranging from .29 to .57).

Task 10 (Structure of Earth and Material Use) had a mean of 6.6 points with one moderately difficult item (item 5) and an average inter-item correlation of .29 (ranging from .21 to .38).

Task 11 (Weather and the Solar System) had a mean of 7.7 points with an average inter-item correlation of .29 (ranging from .20 to .36). The task is appropriate in difficult and internally consistent.

Middle School

Task 2 (Changes of State) had a mean of 5.4 points with one item rather difficult (item 4) and one item slightly easier than the others (item 1), and an average inter-item correlation of .32 (ranging from .14 to .47).

Task 3 (Force, Mass, and Motion) had a mean of 6.5 points with one item quite difficult (item 1), and an average inter-item correlation of .46 (ranging from .25 to .59).

Task 4 (Force/Gravity) had a mean of 5.8 points with three moderately difficult items (items 3, 4, and 5) and an average inter-item correlation of .29 (ranging from .18 to .53).

Task 5 (Types of Energy/Transformations) had a mean of 5.7 points with one very difficult item (item 1), one moderately difficult item (item 3), and an average inter-item correlation of .21 (ranging from .001 to .50).

Task 6 (Organisms/Structures) had a mean of 5.2 points with one very difficult item (item 4), one moderately difficult item (item 1), and an average inter-item correlation of .27 (ranging from .04 to .50).

Task 7 (Energy Flow, Photosynthesis/Organisms) had a mean of 5.8 points with one moderately difficult item (item 2) and an average inter-item correlation of .28 (ranging from .20 to .36).

Task 8 (Heredity) had a mean of 7.1 points with one moderately difficult item (item 5) and an average inter-item correlation of .33 (ranging from .15 to .65).

Task 9 (Evolution, Selection, and Adaptation) had a mean of 6.9 points with an average interitem correlation of .41 (ranging from .33 to .60).

Task 10 (The Dynamic Earth) had a mean of 5.1 points with one very difficult item (item 5) and two moderately difficult items (items 1 and 4), and an average inter-item correlation of .27 (ranging from .21 to .41).

Task 11 (The Earth, Space, and Resources) had a mean of 6.5 points with one moderately difficult item (item 3) and an average inter-item correlation of .27 (ranging from .17 to .63).

High School

Task 2 (Changes of State) had a mean of 5.9 points with one item quite difficult (item 5) and an average inter-item correlation of .34 (ranging from .19 to .47).

Task 3 (Force, Mass, and Motion) had a mean of 6 points with two items slightly difficult (items 4 and 5), and an average inter-item correlation of .43 (ranging from .32 to .57).

Task 4 (Force/Gravity) had a mean of 5.2 points with three moderately difficult items (items 1, 4, and 5) and an average inter-item correlation of .25 (ranging from .08 to .40).

Task 5 (Types of Energy/Transformations) had a mean of 5.5 points with two moderately difficult items (items 3 and 4) and an average inter-item correlation of .28 (ranging from .12 to .42).

Task 6 (Organisms/Structures) had a mean of 4.6 points with one very difficult item (item 2), two moderately difficult items (items 1 and 3), and an average inter-item correlation of .23 (ranging from .11 to .34).

Task 7 (Energy Flow, Photosynthesis/Organisms) had a mean of 5.8 points with one moderately difficult item (item 1) and an average inter-item correlation of .31 (ranging from .21 to .42).

Task 8 (Heredity) had a mean of 6.7 points with an average inter-item correlation of .37 (ranging from .24 to .58).

Task 9 (Evolution, Selection, and Adaptation) had a mean of 5.6 points with two moderately difficult items (items 1 and 4) and an average inter-item correlation of .33 (ranging from .20 to .55).

Task 10 (Earth Science) had a mean of 4.5 points with three quite difficult items (items 1, 2 and 3) and an average inter-item correlation of .2 (ranging from .01 to .43). Except for item 2, the task is appropriate in difficulty and internally consistent.

Task 11 (Earth Science) had a mean of 6.5 points with one slightly difficult item (item 5) and an average inter-item correlation of .38 (ranging from .28 to .48).

Refer to Appendix 3_3a to 3_3d Subject Reliability Tables by Grade Band

3.5. 3 Internal Consistency – Tasks in Grade Levels

The final reliability estimates were based on tasks and grade levels, again, computing Cronbach's alpha, based on standardized items. We viewed values at .70 and above as adequate, given the small number of items used in computing thee values. Most of the values approach or exceed this value. This information is to be used for improving the items in successive years.

Table 3.38. Reading Elementary – Cronbach's A	4lpha	Coefficients
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Task Construct	Grade 3	Grade 4	Grade 5
Task 2 – Decoding and Word Recognition	.898	.913	.909
Task 3 – Decoding and Reading Fluency	.946	.951	.960
Task 4 – Word Recognition and Vocabulary (prefixes/suffixes, dictionary usage)	.759	.794	.788
Task 5 – Vocabulary (synonyms/antonyms, homophones, contextual clues)	.635	.647	.661
Task 6 – Read to Perform a Task (text features), Informational Text: General Understanding (main idea, sequence of events, supporting details)	.716	.761	.753
Task 7 – Literary Text: General Understanding (problem, supporting details), Interpretation (prediction)	.719	.777	.748
Task 8 – Informational Text: General Understanding (main idea, supporting details), Content and Structure (author's purpose)	.743	.784	.756
Task 9 – Literary Text: General Understanding (problem, supporting details), Interpretation (inference)	.725	.748	.731
Task 10 – Read to Perform a Task (graphs, charts), Informational Text: Interpretation (prediction)	.694	.707	.675
Task 11 – Informational Text: General Understanding (main idea, supporting details), Interpretation (cause/effect, inferences)	.752	.781	.745

Table 3.39. Reading Middle – Cronbach's Alpha Coefficients

Task Construct	Grade 6	Grade 7	Grade 8
Task 2 – Vocabulary (contextual clues, figurative language)	.834	.871	.866
Task 3 – Read to Perform a Task	.911	.917	.919
(locate and synthesize information)			
(read directions, charts, and tables; locate and synthesize information)	.822	.864	.863
Task 5 – Informational Text: Demonstrate General Understanding (main idea, supporting details), Develop an Interpretation (prediction)	.824	.828	.834
Task 6 – Literary Text: Demonstrate General Understanding (main idea, supporting details), Develop an Interpretation (prediction)	.782	.807	.813
Task 7 – Literary Text: Demonstrate General Understanding (main idea, supporting details), Develop an Interpretation (characterization, prediction)	.754	.789	.778
Task 8 – Informational Text: Demonstrate General Understanding (supporting details), Develop an Interpretation (inference), Examine Content and Structure (author's purpose)	.802	.844	.821

Task 9 – Literary Text: Demonstrate General Understanding (main idea, supporting details), Develop an Interpretation (theme, prediction)	.792	.826	.825
Task 10 – Literary Text: Demonstrate General Understanding (supporting details), Develop an Interpretation (characterization, inference)	.825	.839	.841
Task 11 – Informational Text: Demonstrate General Understanding (facts), Develop an Interpretation (inference), Examine Content and Structure (fact v. opinion)	.813	.807	.800

Task Construct	Grade 10		
Task 2 – Vocabulary	020		
(contextual clues, figurative language, connotation)	.830		
Task 3 – Read to Perform a Task	021		
(locate and synthesize information)	.931		
Task 4 – Read to Perform a Task (read charts and tables, locate and	015		
synthesize information)	.915		
Task 5 – Informational Text: Demonstrate General Understanding	976		
(main idea), Develop an Interpretation (prediction)	.070		
Task 6 – Literary Text: Demonstrate General			
Understanding (main idea, supporting details),	.846		
Develop an Interpretation (prediction)			
Task 7 – Literary Text: Demonstrate General Understanding (main			
idea, supporting details), Develop an Interpretation (character	.829		
interactions, prediction), Examine Content and Structure (dialogue)			
Task 8 – Informational Text: Demonstrate General Understanding			
(sequence of events, supporting details), Develop an Interpretation	.857		
(inference), Examine Content and Structure (author's purpose)			
Task 9 – Literary Text: Demonstrate General Understanding (main	001		
idea, supporting details), Develop an Interpretation (theme)	.001		
Task 10 – Literary Text: Demonstrate General Understanding	942		
(supporting details), Develop an Interpretation (inference, analysis)	.843		
Task 11 – Informational Text: Demonstrate General			
Understanding (facts), Develop an Interpretation (inference),	.844		
Examine Content and Structure (fact vs. opinion)			
Task Construct	Grade 3	Grade 4	Grade 5
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Task 2 – Numbers	.647	.676	.692
Task 3 – Computation	.531	.595	.649
Task 4 – Measurement: Time/Temperature/Length/Area	.606	.651	.659
Task 5 – Geometry/Shapes	.619	.685	.668
Task 6 – Measurement: Weight/Height/Volume	.560	.602	.621
Task 7 – Interpret Data and Graphs	.742	.773	.760
Task 8 – Applications	.741	.780	.780
Task 9 – Fractions/Decimals/Number Line	.639	.669	.633
Task 10 – Probabilities and Predictions	.693	.729	.729
Task 11 – Algebra/Unknown Quantities	.679	.686	.706

Table 3.41. Mathematics Elementary – Cronbach's Alpha Coefficients

Table 3.42. Mathematics Middle – Cronbach's Alpha Coefficients

Task Construct	Grade 6	Grade 7	Grade 8
Task 2 – Calculations: Numbers, Percents, Fractions and Number Lines	.603	.689	.659
Task 3 – Calculations: Computations and Operations	.501	.545	.587
Task 4 – Statistics and Probability	.601	.625	.708
Task 5 – Statistics: Collect and Display Data	.727	.735	.737
Task 6 – Algebraic Relationships	.584	.625	.656
Task 7 – Measurement: Units, Conversions and Rates	.529	.487	.616
Task 8 – Measurement: Shapes, Angles and Area	.574	.563	.624
Task 9 – Geometry: Angles and Properties	.586	.557	.615
Task 10 – Geometry: Lines and Shapes	Missing	.539	.610
Task 11 – Geometry: Reflections, Transformations and Missing Components	.674	.652	.670

Task Construct	Grade 10
Task 1 – Prerequisite Skills	
Task 2 – Computations and Calculations:	770
Numbers/Estimation/Area	.770
Task 3 – Computations and Calculations:	642
Properties/Operations/Equivalence	.012
Task 4 – Geometry: Shapes/Properties	.738
Task 5 – Statistical Measures and Probabilities	.737
Task 6 – Probability (Representation) and Algebra (Patterns)	.806
Task 7 – Algebra: Variables/Equations/Relationships	.639
Task 8 – Algebra: Graphing/Change/Distance	.624
Task 9 – Measurement: Units/Conversion/Formulas	.749
Task 10 – Geometry: Properties/Planes/Lines	.761
Task 11 – Geometry: Transformations/Symmetry/Coordinates	.678

Table 3.43. Mathematics High – Cronbach's Alpha Coefficients

Refer to Appendix 3_4a through 3_4d Internal Consistency by Task

3.5.4 Reliability of Administration Study

A special study was completed to ascertain the reliability of administration. Even though we required all teachers to pass a proficiency test on administration of the test in general and in each subject area, we also thought it important to determine the degree to which teachers could correctly and consistently observe various aspects of an administration with various students who had significant cognitive disabilities. In this study, using primarily Scaffold Administrations of the assessment, we videotaped 10 assessors administering a number of different reading and mathematics tasks to students in all grade bands (EL=Elementary School, MS=Middle School, and HS=High School). Following is a list of the subject area and tasks that were administered.

- MS Math Scaffold Tasks 2, 3
- MS Math Scaffold Tasks 9, 10
- MS Read Scaffold Tasks 2, 3
- HS Read Scaffold Tasks 9, 10
- EL Science Scaffold Tasks 6, 11
- MS Math Scaffold Tasks 7, 9
- MS Read Standard Tasks 2, 3
- EL Read Scaffold Tasks 2, 3

We also had the 13 teachers recruited for this study look at various aspects of the test administration. Following are the areas they focused on while observing the test administration.

- Student-Assessor Positioning
- Materials Placement with Student
- Student not distracted by scoring of protocol

- · Directions read correctly to student
- Preamble (if available) read correctly to student
- Item (prompt) read correctly to student
- Appropriate Rereading/Re-prompting as needed
- Pacing
- Correct supports and reinforcement given
- Items scored correctly

For each of the dimensions above, they were directed to rate the accuracy of administration using the following four-point scale. For three aspects, Item (prompt) read correctly to student, Appropriate Rereading/Re-prompting as needed, and Correct supports and reinforcement given, teacher ratings were divided evenly between good or strong and poor or extremely weak. The remaining aspects were rated as good or strong by the majority of assessors.

- 1 = extremely weak administration by Assessor
- 2 = poor administration by Assessor
- 3 = good administration but not fully correct
- 4 = strong administration by Assessor
- N/A = not applicable to category

Assessor 1

The average ratings for this assessor ranged from 3.38 to 3.92, with all aspects having a mode of 3 or 4. All aspects were rated as good or strong by the majority of teachers, with many aspects being rated as good or strong by all participating teachers. In general, this assessor's administration was rated positively.

Assessor 2

The average ratings for this assessor ranged from 3.46 to 4.00, with all aspects having a mode of 3 or 4. All aspects of the assessor's administration were rated as good or strong by all assessors, with the exception of reading items, which was rated as good or strong by 12 of the 13 teachers. In general, this assessor's administration was rated positively.

Assessor 3

The average ratings for this assessor ranged from 3.00 to 4.00, with all aspects having a mode of 3 or 4. The assessor's accuracy in reading directions and accuracy in reading preambles were rated as good or strong by just over half of the teachers who responded. All other aspects of administration were rated as good or strong by the majority of teachers. This assessor's administration was rated positively, with the exception of accuracy in reading directions, and accuracy in reading preambles.

Assessor 4

The average ratings for this assessor ranged from 2.00 to 4.00, with modes varying across the aspects. Two aspects of the assessor's administration, accuracy in reading directions, and accuracy in reading preambles, were rated as poor or extremely weak

by 11 and 12 teachers, respectively. This assessor's administration was strong in terms of student-assessor positioning, accuracy in scoring items, materials placement, student distraction and pacing, but weak in other areas.

Assessor 5

The average ratings for this assessor ranged from 3.38 to 4.00, with all aspects having a mode of 4. All aspects of the assessor's administration were rated as good or strong by the majority of teachers, with many aspects being rated as good or strong by all participating teachers. In general, this assessor's administration was rated positively.

Assessor 6

The average ratings for this assessor ranged from 1.92 to 4.00, with all aspects having modes of 4, except for accuracy in reading directions and accuracy in reading preambles, which had modes of 1 and 2, respectively. These two aspects of the assessor's administration were rated as poor or extremely weak by the majority of teachers. All other aspects of the administration were rated as good or strong by the majority of teachers, with many aspects being rated as good or strong by all participating teachers. With the exception of the assessor's accuracy in reading directions and preambles, this assessor's administration was rated positively.

Assessor 7

The average ratings for this assessor ranged from 3.77 to 4.00, with all aspects having modes of 4. All aspects of the administration were rated as good or strong by the majority of teachers, with most aspects being rated as good or strong by all participating teachers. In general, this assessor's administration was rated positively.

Assessor 8

The average ratings for this assessor ranged from 1.75 to 3.83, with all aspects having a mode of 3 or 4, except for placement of materials and accuracy in reading preambles. The assessor's accuracy in reading preambles was rated as poor or extremely weak by the majority of assessors. Approximately half of the teachers rated the assessor's placement of materials as good or strong. All other aspects were rated as good or strong by the majority of teachers, with two aspects being rated as good or strong by all participating teachers. With the exception of accuracy in reading preambles and placement of materials, this assessor's administration was rated positively.

Assessor 9

The average ratings for this assessor ranged from 3.46 to 4.00, with all aspects having a mode of 4. All aspects of the administration were rated as good or strong by the majority of teachers, with many aspects being rated as good or strong by all participating teachers. In general, this assessor's administration was rated positively.

Assessor 10

The average ratings for this assessor ranged from 3.77 to 4.00, with all aspects having a mode of 4. All aspects of the administration were rated as good or strong by the

majority of teachers, with most aspects being rated as good or strong by all participating teachers. In general, this assessor's administration was rated positively,

Summary of 10 Assessors

When 13 teachers viewed the administration of various tasks (mostly scaffold tasks because they were more difficult to administer), the general outcome was that (a) proper procedures were noted most of the time (on the 10 variables that were highlighted) and (b) agreement was high. Occasionally, a few teachers were critical of the procedures and disagreed, but for the most part, administration of the Extended Assessment in Oregon is a stable process. It is likely that the web-based training and proficiency examination of all qualified assessors and trainers is, in part, responsible for this.

Refer to Appendix 3_5 Internal Validity Study

3.6. RESPONSE PROCESS EVIDENCE

Student response processes to most general assessment items (selected response, short constructed response) may be considered through typical item review procedures. However, cognitive processes used in responding to items and tasks are more difficult to assess directly for alternate assessments aligned to alternate achievement standards. We approached the test demands by creating two versions of each test: standard and scaffold. We viewed the scaffold administration type as an accommodation, to allow the assessment to tap into a student's ability on the construct(s) being measured, curtailing the effect of a student's disability on his/her test result. A true accommodation should allow a student to be assessed in such a way that a disability does not misrepresent the student's true performance. In this section, we first describe our training and then the effects from using the Standard and Scaffold administrations.

3.6.1 Training in Administration of Standard and Scaffold Tests

As with any other type of expert review process, reviewers should be well trained, and their selection, expertise, training, and rating procedures should be thoroughly documented (Standard 1.7). When someone other than the student is partially responsible for the responses to an assessment, the potential exists for observer bias is high. We developed a training manual and video to ensure comparable responses across students by explicitly defining the flexible ("negotiable") and fixed ("non-negotiable") aspects of administration protocol. When assessment administration procedures are implemented according to explicit standardized guidance, the potential for observer bias is reduced. Clearly written, easy-to-follow scripts were created to help teachers adhere to a prescribed sequence of minimally intrusive prompting on performance tasks. The explicit training and guidance presented as a fixed component of the Extended Assessment system is presented as a critical contribution to the reliability of this assessment.

Qualified Trainer/Assessor Expectations 2007-2008

Background: To administer Extended Assessments to students in the state of Oregon, educators must be appropriately trained as either a Qualified Assessor of the Extended Assessments or a Qualified Trainer of the Extended Assessments.

Educators who are trained in the process of administering the Extended Assessments to students are referred to as Qualified Assessors (QAs). Educators who are trained to administer the assessments as well as to train others in the administration of the assessments are referred to as Qualified Trainers (QTs).

In 2007-2008, Qualified Trainers were trained by state-level trainers in one of 8 regional trainings scheduled to occur in October and November. Qualified Assessors were trained (or provided updates) by QTs. Qualified Assessor trainings. Updates were scheduled by their local Qualified Trainers between November and the Spring Extended Assessment testing window.

Qualified TRAINER Expectations (Training)

The Trainer outcomes anticipated from Oregon's Extended Assessment Training system are as follows:

Qualified Trainers will:

- 1. Train new Assessors who have no familiarity with the system/assessment
- 2. Provide training and coaching in the form of updates and refreshers to current Assessors
- 3. Maintain awareness of updates and changes by attending state-supported networking sessions, Video Conferences, and monitoring the department website
- 4. Contact ODE with questions, concerns, and/or suggestions from the field regarding the assessment/expectations
- 5. Serve as the local "point" person between ODE and district/ESD
- 6. Award certificates and maintain awareness of Qualified Assessors
- 7. Find host location where they can set up local trainings (if necessary)
- 8. Advertise scheduled trainings and/or their availability to provide trainings
- 9. Work with local district administrators to determine administrative details to support the trainings including:

Substitute time Number of Assessors needed in the area Supports necessary (copying etc) Prepare any additional supporting documentation (handouts with district specific information for potential Assessors)

Qualified TRAINER/Qualified ASSESSOR Expectations (Administering tests):

The Assessor outcomes anticipated from Oregon's Extended Assessment Training system are as follows:

- 1. Prepare materials (monitor materials preparation) and setting for individual administration of the Extended Assessment
- 2. Administer assessments directly to students
- 3. Score student responses
- 4. Maintain Qualified Assessor status by maintaining an awareness of updates and changes
- 5. Maintain security status through District Security Administrator
- 6. Enter scores in the state's online data entry system
- 7. Interpret results for student, family, or educational team

Important Changes in 2007-2008

Minimum Participation Rule (2007-2008)

An Assessor may consider the minimum participation option if a student takes all of the Prerequisite Skills items and also attempts the 10 items of at least two Content Prompt Tasks. Items on these tasks must be attempted by the student for participation to be awarded (i.e. not scored as "D"). All accommodations and appropriate provisions should be considered thoroughly prior to discontinuing an Extended Assessment administration. Students taking any less than this minimum number of items will not count toward AYP participation.

Calculating Independence to Access (2007-2008) Score (Support for Access) To determine the level of support to provide when moving into the Content Prompts the Assessor will select the mode (i.e. the most commonly occurring level of Independence score from the student's Prerequisite Skills responses). If there are two modes, i.e. two groups with the same number of scores, select the lower of the two. *Power points* – A series of power point slides were developed in each content area in which the following topics were addressed: names of tasks, administration considerations, standard versus scaffold administrations, and scoring student responses.

Refer to Appendix 3_6 Extended Assessment Training Materials and Process

Proficiency From Web Based Training

In these appendix tables, the results are presented for five areas: (a) administration of tasks, (b) administration of reading, (c) administration of writing, (d) administration of mathematics, and (e) administration of science. The first letter in each area is used to label the table, which is then followed by trial number (1 or 2) and task number. For each area, the teacher was automatically allowed two opportunities (referenced below as "trials") at proficiency. However, at special request and approval, teachers were permitted access a third (or subsequent) attempt(s) if necessary. Teachers taking a second "trial" were those teachers who did not meet the criteria for proficiency 80% on the first trial. Therefore, for reading, task 13 on the second trial, the code would be r213. In the tables, the percentage of option selections is displayed (the option with the largest percent is the correct answer). The subject area and trial number are in the headers. In this analysis, only qualified assessors' and qualified mentors' results (user level 2 or 3) are reported because test administration was limited to this population.

Administration

On the first trial, 1103 teachers (representing 85% of the population) passed the administration proficiency test and 186 teachers (representing 14% of the population) did not. For individual questions, the percentage of teachers who answered correctly ranged from 52.2% (Question 16) to 98.8% (Question 7), with the majority around 85% to 95%. Two questions (Questions18 and 19) had around 75% answering correctly.

On the second trial, 185 teachers (representing 14% of the population) passed the proficiency test and 35 teachers (representing 3% of the population) did not. For individual questions, the percentage of teachers who answered correctly ranged from 8.1% (Question 19) to 14.4% (Question 7), with the majority falling around 11% to 13%.

Reading

On the first trial, 1209 teachers (representing 94% of the population) passed the reading proficiency test, and 80 teachers (representing 6% of the population) did not. For individual questions, the percentage of teachers who answered correctly ranged from 61.5% (Question 12) to 99.1% (Question 15), with the majority falling around 94% to 98%, and most of the rest at 75% and above.

On the second trial, 80 teachers (representing 6% of the population) passed the proficiency test, and 46 teachers (representing 4% of the population) did not. For individual questions, the percentage of teachers who answered correctly ranged from 2.8% (Question 13) to 6.2% (Questions 3, 11, 14, 15, and 17), with the majority around 4% to 6%. Two questions were particularly difficult, answered correctly by only 3.3% (Question 7) and 2.8% (Question 13). For both questions, a large number of participants selected the most popular distracter.

Writing

On the first trial, 1248 teachers (representing 97% of the population) passed the writing proficiency test, and 41 teachers (representing 3% of the population) did not. For individual questions, the percentage of teachers who answered correctly ranged from 70.4% (Question 11) to 97.8% (Question 1), with the majority falling above 90% and a few between 80% and 90%.

On the second trial, 39 teachers (representing 3% of the population) passed the proficiency test, and 72 teachers (representing 6% of the population) did not. For individual questions, the percentage of teachers who answered correctly ranged from 2% to 3%.

Mathematics

On the first trial, 1086 teachers (representing 84% of the population) passed the mathematics proficiency test, and 203 teachers (representing 16% of the population) did not. For individual questions, the percentage of teachers who answered correctly ranged from 54.4% (Question 7) to 98.9% (Question 1), with the majority falling above 90%. Two questions (Questions 8 and 13) were relatively difficult with 64.3% and 67.6% answering correctly.

On the second trial, 200 teachers (representing 16% of the population) passed the proficiency test, and 12 teachers (representing 1% of the population) did not. For individual questions, the percentage of teachers who answered correctly ranged from 9.6% (Question 6) to 15.5% (Questions 1, 3 and 4), with the majority falling around 13% to 15%. Two questions (Questions 7 and 12) were somewhat difficult with 11% and 11.8% answering correctly.

Science

On the first trial, 1090 teachers (representing 84% of the population) passed the science proficiency test, and 199 teachers (representing 15% of the population) did not. For individual questions, the percentage of teachers who answered correctly ranged from 50% (Question 6) to 97.9% (Question 7), with the over half above 90%. Three questions (Questions 14, 16, and 17) were slightly difficult with 75.4%, 77%, and 76% answering correctly.

On the second trial, 199 teachers (representing 15% of the population) passed the proficiency test, and 16 teachers (representing 1% of the population) did not. For individual questions, the percentage of teachers who answered correctly fell around 14% to 15%. Three questions (Questions 12, 13, and 19) were particularly difficult, with 11.2%, 9.6%, and 9.4% answering correctly.

Refer to Appendix 3_7 Training Proficiency Results By Subject and Trial

3.6.2 Participation in Task Completion

Minimum Participation and Item Level Analysis

Students are required to participate in a minimum number of Extended Assessment items in order to be considered a valid participant in Oregon's Alternate Assessment. Students must respond to all prerequisite task items and at least two additional content tasks in a given subject area to be considered valid participants in the assessment.

A = Already has Skill

If a teacher believed the student already had the skill (prerequisite only) and, they could elect to mark the task with an "A" rather than administer the task to a student. This option was devised to (a) allow the teacher to be more efficient in test administration, (b) avoid having the student necessarily respond to items that were deemed too easy and, (c) avoid having the student become fatigued. A score of "A" was not valide on the Content Prompt items in Tasks 2 through 11.

I = Inappropriate

If a teacher uses professional judgment to determine that the contents of an item or task are inappropriate for a student given the interaction between the (typically sensory) nature of the student's disability and the structure of the item, then the teacher may bypass administration of the item/task by assigning a code of "I" (Inappropriate).

R = Refused

On some items, the student would not respond for a variety of reasons; although we trained teachers to stop the administration so they could try it on another day when the student was more responsive, there were some occasions when testing could not be continued and the item was marked as R; this option was only allowed for Prerequisite Skills (Task 1) and Field Test (Task 12).

D = *Too Difficult*

If a teacher uses professional judgment to determine that the contents of an item or task are too difficult for the student to attempt, the teacher may bypass administration of the item/task by assigning a code of "D" (too difficult). Items coded this way receive a value of zero prior to analysis.

N = Not Administered

On a very few occasions, teachers simply did not administer the task. This code was confined to the Field Test items only (Task 12).

Table 3.44. Summary of Recodes for Tasks 1 through 12

In the columns below frequency counts are presented for the number of students coded: (A) already has the skill, (I) inappropriate because of a disability, (R) refused, (D) too difficult, and (N) not administered for unspecified reasons.

Reading <u>For Task 1</u> 7,104 @ A=4 664 @ I=. 394 @ R=. 0 @ D=0 0 @ N=.	1,492 @ A=4 338 @ I=. 114 @ R=. 0 @ D=0 1,523 @ N=. <i>Math</i> For Task 1 5530 @ A=4
For Tasks 2 through 11 0 @ A 2308 @ I=. 0 @ R	5339 @ A=4 529 @ I=. 343 @ R=. 0 @ D=0 0 @ N=.
0 @ N 11,074 @ D=0 0 @ N	<u>For Tasks 2</u> <u>through 11</u> 0 @ A
<u>For Task 12</u> 2433 @ A=4 413 @ I=. 250 @ R=. 0 @ D=0	2355 @ I=. 0 @ R 19,292 @ D=0 0 @ N
0 @ D=0 3235 @ N=. <i>Writing</i> For Task 1 3,336 @ A=4 352 @ I=. 205 @ R=. 0 @ D=0 0 @ N=.	For Task 12 1,744 @ A=4 446 @ I=. 340 @ R=. 0 @ D=0 3235 @ N=. Science For Task 1 2,067 @ A=4
For Tasks 2 through 11 0 @ A 1,548 @ I=. 0 @ R	191 @ I=. 163 @ R=. 0 @ D=0 0 @ N=.
9,849 @ D=0 0 @ N	<u>For Tasks 2</u> <u>through 11</u> 0 @ A 712 @ I–
FULLASK 12	∕ıs ⊎ I=.

0 @ R 4,050 @ D=0 0 @ N
For Task 12 763 @ A=4 127 @ I=. 47 @ R=. 0 @ D=0 1,073 @ N=.

D=0

LEVEL OF SUPPORT PREREQUISITE SKILLS SUPPORTS (Applied as deemed appropriate)	CONTENT PROMPT SUPPORTS (Applied as indicated by Independence to Access Score)
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Participation by Level of Support

Across the four subject areas, assessors are able to administer the Content Prompts using one of four levels of support as indicated by the outcomes of the Prerequisite Skill administration.

Full Physical Support* Provided for students who routinely need full physical supports to participate in instruction. Full physical support is not to be given to a student who does not receive full physical support in the instructional environment. Full physical support is reserved for those students with significant mobility impairments who, as a result, rely on these supports routinely	Assisting with positioning toward response options Assisting with positioning toward correct response options Positioning student's hand on correct response following progressive movement along the continuum of supports from full independence (as needed)	 Based on prolonged hesitation or an indication of student uncertainty, assessor provides any (or a combination) of the following: Moving student to materials Positioning student to a responding position in the materials Orienting student to the appropriate response options in the materials Moving student's hand over a series of response options in the materials
Partial Physical Support Visual, Verbal, or Gestural	Gentle movement of the student's hand (prompting) toward the materials Physical repositioning if student selects a non-response option Visual: Physical adjustment of	 Based on prolonged hesitation or an indication of student uncertainty, assessor provides any (or a combination) of the following: Touch student to direct his/her attention toward the appropriate materials Touching student to determine/obtain attention Based on prolonged hesitation or an
Support	the materials so that they are in a optimal visual location for the student's needs. Verbal: Additional verbal directions about the item, Gestural: Specific gesturing toward the materials to indicate the intent of the item	 indication of student uncertainty, assessor provides any (or a combination) of the following: Visual: Maintaining optimal visual placement of assessment materials for student (i.e. moving materials to ensure they remain within student gaze) Verbal: Rephrasing <i>process</i> directions: "You are choosing from these three" "You are putting these in order" "You are telling me yes or no" Gestural: Pointing to/tapping materials to achieve/maintain focus on appropriate item
Fuil independence	Student needs no supports to perform the item successfully	Student needs no supports to gain access to the structure of the item or the associated materials.

3.6.3 Role of Test Administration Options

Two decisions were involved in the administration of the Extended Assessments that allowed the assessment to vary (within pre-established parameters) at the student level: (a) IEP teams first had to determine whether the student should be presented with the Standard Administration of the Extended Assessment or with the Scaffold Administration of the Extended Assessment, and (b) when presenting the items and tasks during administration, teachers had to determine what types of support to provide based on the student's level of independence (supports included: independent, with visual-verbal-auditory guidance, with partial physical guidance, and with full physical guidance).

Table 3.45. Correlation of Prerequisite Skills with Content Performance

As noted throughout, Task 1 presents 10 items for the teacher to document the students' prerequisite skill while tasks 2-11 document the students' content knowledge. Each item in task 1 is scored on a level of independence (1-4) while each item in all content knowledge tasks are scored on a scale of 0 (incorrect) to 1 (partially correct) to 2 (completely correct). Performance on both dimensions is quite highly related, as reflected in the correlations below.

Reading	Writing*	Mathematics	Science*
.75	.66	.63	.67
.67	.62	.49	.63
.71	.65	.62	.58
	.75 .67 .71	.75 .66 .67 .62 .71 .65	Reading Writing Mathematics .75 .66 .63 .67 .62 .49 .71 .65 .62

*Writing @ grade 4, 7, 10 *

*Science @ grade 5, 8, 10

Regression of Prerequisite Skill, Type of Administration, and Grade on Content Knowledge

A regression analysis is provided for each grade band with Prerequisite Skills, type of administration, and actual grade level within the band regressed on content knowledge. This analysis was conducted to ascertain the variance in the content knowledge accounted for by administration type and grade level. As noted above, a significant amount of variance is accounted, more by the Prerequisite Skills task than the type of administration (Standard versus Scaffold).

In reading, the semi-partial corrections between content knowledge and Prerequisite Skills were .53 for elementary school students, .48 for middle school students, and .52 for high school students. In writing, the semi-partial corrections were .42 in the elementary grades, .38 in the middle grades, and .39 in the high school grades. In mathematics, these semi-partial correlations were .44 with elementary school students, .32 with middle school students, and .44 with high school students. In science, the semi-partial correlations for elementary grade bands were .47; for middle grade bands, they were .54; for high school, they were .41. When block 1 contained Prerequisite Skills and

grade level, most of the variance was explained with little added when type of administration (standard versus scaffold) was added as another block.

Refer to Appendix 3_8 Regression Analyses

In the following figures, the data in the front surface is based on items presented to students via Scaffold Administration (coded 1) and in the back surface is based on items presented to students via Standard Administration (coded 0). T1 tot (amount of prerequisite skill) is the horizontal axis and tot (content knowledge) the vertical axis. As can be seen in all four figures, the scaffold administration provided more access to students with limited Prerequisite Skills (low levels of independence) than the standard administration. Indeed, it is even apparent that some students could achieve high levels of performance on the test (had high 'tot' scores) who were extremely limited in their Prerequisite Skills (had low 'tot1' scores).









Figure 3.3. Mathematics Regression of Prerequisite Skills (10-40) and Type of Administration (0-1) on Content Knowledge Total (0-100) Across all Grades



Figure 3.4. Science Regression of Prerequisite Skills (10-40) and Type of Administration (0-1) on Content Knowledge Total (0-100) Across all Grades



Summary of Regression Analysis Findings

The figures above reflect the predominance of Prerequisite Skills over test administration type. Most students taking the standard administration demonstrated adequate prerequisite skills to participate in the administration of the assessment (scoring about 30 of the 40 points). As expected more students with lower prerequisite skills were able to participate in the content prompts of the Scaffold Administration. In addition, more students requiring additional supports (ranging from full physical support to visual, verbal, or gestural support) were able to achieve success on items within the content prompts.

3.7. INTERNAL STRUCTURE OF CONTENT TESTS

The *Standards* (AERA et al., 1999, pp. $(13-15)^{10}$ call for a study on internal structure as part of test validation. For valid test score interpretations and validity generalization, it is expected that (a) the items show some level of internal consistency (Standard 1.11); (b) the internal structure of the test remains stable across major reporting groups (p.15); and (c) the internal structure of the test remains stable across alternate forms of the same test (pp. 51-52).

Inter-task correlations are expected to be positive and moderate. High inter-task correlations are not desirable because the strands may essentially reflect very similar types of skills or abilities.

We also checked the number of dimensions (constructs) as operationally measured by the assessment and then reflected in the test data. Subject areas such as reading, mathematics, and science (at the lower grade levels) are typically thought of as single constructs; however, student performance on the assessment items may be contingent on other unintended and irrelevant factors. Performance on constructed response items in mathematics, for example, may dependent partially on reading level. Likewise, to solve a science problem, reading and writing skills as well as some knowledge of mathematics may be essential. See criterion-related evidence in section 8.

Factor Analysis

Exploratory factor analysis was used to examine the dimensionality of the Extended Assessments. Measurement dimensionality can be considered from the perspective that common factors exist when the correlation among items can be explained in terms of a relatively small number of underlying components. Theoretically, if a set of items are measuring the same construct, then they should be correlated or in other words they share common variance. When properly analyzed these correlations produce an optimal factor structure such that each item loads (correlates) with factors common to other items. The higher the loading, the more that item correlates with that factor. It is not unusual to have only one factor that is common to all items, indicating measurement unidimensionality. Multidimensionality occurs when more than one common factor is necessary for sufficiently explaining the observed set of item correlations.

The use of exploratory factoring has been criticized as lacking theoretical argument, in contrast to confirmatory factoring methods. Without good theoretically based hypotheses, however, it is possible to examine measurement dimensionality using exploratory methods. When using the exploratory methods, it is imperative to use appropriate analytic decisions and to apply careful interpretation of results.

Exploratory and not Confirmatory. The use of exploratory methods with the Extended Assessments is justifiable since the underlying structure explaining the examinee

¹⁰ American Educational Research Association (AERA), American Psychological Association, & National Council on Measurement in Education (1999). *Standards for educational and psychological testing.* Washington, DC: AERA.

response process may indeed involve multiple factors. In fact, it is widely recognized that responses to large item sets are quite likely to involve multiple factors. An increasingly popular concept pertaining to this problem is the issue of 'essential dimensionality'. Essential dimensionality (Reckase, 1985; Nandakumar, 1991) is obtained when the additional factors beyond the first do not invalidate the important item response model assumption of local independence. While item response modeling is not used in these analyses, the fundamental idea of essential dimensionality pertains nevertheless. Results from exploratory factor analysis, e.g., variance explained, scree plots, etc., may suffice for a rudimentary argument that a dominant single dimension underlies the response process under observation. Note, there are numerous alternative procedures for investigating the presence of multidimensionality (e.g., McDonald and Ahlawat, 1974; Stout, 1987). In fact, for a thorough study of the measurement dimensionality associated with the extended assessments, it would be advisable to further investigate the dimensional structure using the methods cited above.

Exploratory Procedures. Procedures for applying exploratory factor analysis include decisions regarding (1) factor extraction, (2) factor retention, and (3) factor rotation, and (4) goodness-of-fit of the estimated factor model to the observed data. For these data analyses, maximum likelihood (ML) factor extraction and varimax factor rotation were used. (Rotation is unnecessary if no more than one significant factor was extracted.) The maximum likelihood procedure is preferred when distributional assumptions are adequately met. Specifically, normally distributed data are assumed with ML. Use of ML results in helpful goodness-of-fit statistics for assessment of model appropriateness. The maximum likelihood procedure is preferred over principal components when random measurement error is assumed to be operating and the desire is to reproduce the item correlation matrix (Gorsuch, 1983; Fabrigar et al., 1999). Principal components analysis assumes zero measurement error, which is not a reasonable assumption. In addition to the ML extraction, rotation, and goodness-of-fit tests, a statistical test comparing a single factor model to the multiple factor model was completed.

Following extraction, several methods are widely used for determination of the number of significant common factors. Most common is the use of the eigenvalues over 1.0 (Kaiser, *). This, however, has been criticized as excessively liberal (Velicer and Jackson, 1990). The criteria for retaining factors in this study was both the size of eigenvalues and the use of the scree plot. The scree plot is a graphic display of the factors. Usually, many trivial factors are extracted. The scree plot indicates at which point a factor is relatively minor or spurious.

After extraction, it is possible to rotate the factors in an effort to redistribute the factor loadings and maximize the factor loadings on a single factor (correlation of items with factors). The varimax rotation assumes that multiple factors are uncorrelated, and the rotation redistributes the loadings to provide a more 'simple' interpretation of the results.

After extraction and rotation, the model can be evaluated for goodness-of-fit to the observed data. Using ML, goodness-of-fit indices are provided, which test for how well

the estimated factor model accounts for the observed data. The statistical test of fit considers how large the residual (unexplained) correlations are. Large residuals indicate poor fit, i.e., the factor structure does not explain the observed data very well. Ideally, the fit should be statistically nonsignificant. Because the sample sizes tend to be large, goodness-of-fit tests are very sensitive and the models are often rejected (statistically significant goodness-of-fit indicating large residuals).

The results are generally uniform across all content areas and grade-bands. Referring to Appendices A7a1, A7a2, A7a3, A7b1 to A7d3 (separate tables of results for each of the 12 testings), the first factor of the unrotated factor matrix accounted for most variance explained. These findings are illustrated clearly in the scree plot for each test. Note, in no case was the 1 factor model equivalent to the multiple factor model, suggesting that the additional factors do account for a statistically significant amount of variance in the data.

Analyzing the task total scores for each of the content by grade bands tests, only 1 factor was extracted in all 12 cases.

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Refer to Appendices 3_9a – 3_9l Subject and Grade Factor Analyses Refer to Appendix 7_1a,

3.8. CRITERION-RELATED EVIDENCE

The Standards (AERA et al., 1999, pp. 13-15) also call for validity evidences based on relations to other variables. External evidences for the construct being measured may be found in the relationship between the test and other similar or dissimilar measures. Evidences of this type are sometimes referred to as "convergent" and "divergent," respectively. For example, a reading assessment should yield scores that are more closely related to other reading scores that are more closely related to other math scores that are more closely related to other math scores that are more closely related to other math scores that are more closely related to other math scores that are more closely related to other math scores that are more scores.

3.8.1 Multi-Trait Relations

In this analysis comparisons were made between the correlation among tasks within *the same* subject area versus the correlation on tasks from *different* subject areas.

Reading and Other Subjects

Correlations between the tasks within the reading assessment fell mostly in .6/.7 range, with a few correlations dipping into the .5 range. In general, the correlations within this assessment were higher than those between reading tasks and tasks in other content areas. Correlations between reading tasks and math tasks were in the .4/.5 range. Correlations between reading tasks and science tasks were in the .5/.6 range. There were a few unusually high correlations between Task 3 on the science assessment and Tasks 2 and 3 on the reading assessment. Correlations between reading tasks and writing tasks were in the .5/.6 range, with some correlations falling into the .4 range. There were some unusually high correlations between Tasks 2 and 3 of both assessments. These data suggest that the skills tested in the reading tasks are more comparable to those tested within the reading assessment than to those tested in assessments in the other content areas.

Mathematics and Other Subjects

Correlations among the tasks within the math assessment fell mostly in the .50/.60 range. There were a few unusually low correlations between Tasks 3 and 11 and the other math tasks. In general, the correlations within this assessment were higher than those between math tasks and tasks in other content areas. Correlations between math tasks and reading tasks were in the .40/.50 range. Correlations between math tasks and science tasks were in the .50 range, with several correlations falling in the .40 and .60 ranges. These data suggest that the skills tested in the math tasks are more comparable to those tested within the math assessment than to those tested in assessments in the other content areas.

Science and Writing Correlations

Correlations between tasks within the science assessment fell mostly in the .60 range, with a few correlations in the .50 and .70 ranges. These correlations were higher than those between science tasks and reading or math tasks (see above).

Correlations between tasks within the writing assessment fell mostly in the .50/.60 range, with several correlations reaching the .70 range. These correlations were slightly higher than those between writing tasks and reading tasks (see above).

These data suggest that the skills tested in the science and writing tasks are more comparable to those tested within their respective content areas than to those tested on the reading or math assessments.

Refer to Appendix 3 10 Within Subject Correlation Outcomes

3.8.2 Performance by Disability in Content Tests

Though participation in the Extended Assessments in Oregon is not defined by a student's disability, certain general assumptions about level of cognitive ability and disability category inform the development of the assessments. For example, it is generally expected that (in the absence of any secondary disabilities and in the context of adequate opportunity to learn) the characteristics associated with an orthopedic impairment in mobility are not considered to contribute to significant cognitive impairment. Similarly, characteristics associated with blindness or deafness (in the absence of any secondary disabilities, and in the context of adequate opportunity to learn) are not considered to contribute toward significant cognitive impairment.

In support of these assumptions, descriptive analyses were run to determine whether the students most likely to participate in this assessment (based solely on the general nature of their disability) were in fact students with disability whose characteristics are most typically associated with cognitive impairment. These were theorized to be students with: Mental Retardation, students with traumatic brain injuries, and students with Autism Spectrum Disorder.

In the tables below, we present performance totals for the content prompts for each grade level and each type of disability; as expected, students whose disabilities imply more significant cognitive disabilities (10-Mental Retardation and 74-Traumatic Brain Injury and 82-Autism Spectrum Disorder) performed at lower levels than students whose disabilities imply less severe cognitive disabilities (90-Specific Learning Disability). Other categories were varied as expected.

Reading

Elementary

Students with each category of disability had significant differences from at least one other category. Most categories differed significantly from four or five other categories. Students with Specific Learning Disabilities differed significantly from all but one other category, Emotional Disturbance. Students with Hearing Impairments and students with Traumatic Brain Injury differed significantly from only one other category (Specific Learning Disability).

Middle School

Most categories had significant differences from three or four other categories. Three categories of disability (Hearing Impairment, Visual Impairment, and Traumatic Brain Injury) had no significant differences from any other disability category.

High School

There were few significant differences between categories of disability. Two categories had significant differences from only two other categories, Autism Spectrum Disorder and Specific Learning Disability. Two categories had significant differences from only one other category, Other Health Impairments and Mental Retardation. All other categories showed no significant differences.

Writing

Elementary

The Specific Learning Disability category differed significantly from four other categories, Mental Retardation, Hearing Impairment, Orthopedic Impairment, and Autism Spectrum Disorder. Other categories had significant differences from only three, two, or one other category. Students with Traumatic Brain Injury had no significant differences from any other category.

Middle School

Most disability categories had significant differences from one to three other categories. Students with Hearing Impairment, Emotional Disturbance, and Traumatic Brain Injury, however, had no significant differences from any other category.

High School

There were few significant differences between categories of disability. Students with Mental Retardation, Other Health Impairments, Autism Spectrum Disorder, and Specific Learning Disabilities had one or two significant differences from other categories. Other categories had no significant differences from any other category.

Mathematics

Elementary

Most categories had significant differences from three, four, or five other categories. Students with Specific Learning Disabilities had significant differences from all but two other categories (Emotional Disturbance and Traumatic Brain Injury). Students with Visual Impairment had a significant difference from only students with Specific Learning Disabilities. Students with traumatic brain injury showed no significant differences from any other category.

Middle School

Most categories had significant differences from three, four or five other categories. Students with Hearing Impairment had a significant difference only from students with Specific Learning Disabilities. The categories of Visual Impairment and Traumatic Brain Injury showed no significant differences from any other category.

High School

Most categories had a significant difference from one category, or from no other category. Students with Mental Retardation and Specific Learning Disabilities each showed significant differences from three other categories.

Science

Elementary

Most categories had two or fewer significant differences with other categories. Students with Mental Retardation and Autism Spectrum Disorder each showed significant differences from four other categories.

Middle School

Most categories had significant differences from one category, or from no other category. Students with Autism Spectrum Disorder had significant differences from three other categories. Students with Specific Learning Disabilities had significant differences from two other categories.

High School

All categories had significant differences from three or fewer other categories. Students with Autism Spectrum Disorder and Specific Learning Disabilities had significant differences from three other categories. Students with Mental Retardation and Emotional Disturbance had significant differences from two other categories. Students with Orthopedic Impairment and Other Health Impairments had significant differences from one other category. All other categories had no significant differences from any other category.

Refer to Appendix 3_11 Between Subject Correlation Outcomes