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Office of Elementary and Secondary Education
US Department of Education
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Washington, DC 20202

Dear Dr. Harmon:

This letter describes the evidence that Oregon is providing that demonstrates the technical quality of its mathematics content standards and assessment system. We appreciate the opportunity to receive technical assistance regarding this submission and look forward to working with you and others at the Department to ensure that Oregon provides its stakeholders with a mathematics assessment that addresses the requirements of the law and meets their unique needs.

Please let me know if I can provide any additional information or answer any questions you might have.

Thank you very much for your support,

Tony Alpert
Director of Assessment
Oregon Department of Education

Evidence of Compliance with NCLB of Oregon's Mathematics and Alternate Mathematics Assessments

Assessment of New Mathematics Content Standards

Oregon adopted new mathematics content standards for grades 3 – 8 in December 2007. Oregon adopted new mathematics content standards for high school in June 2009. In 2008, Oregon contracted with WestEd to conduct an independent evaluation of the alignment of Oregon's existing assessment items at grades 3 – 8 to the new content standards (Doc. 4.2: Oregon Mathematics Alignment Study Final Report (2008)). Following the model used by WestEd, Oregon organized a team of three mathematics education experts to conduct a similar evaluation of alignment of Oregon's existing high school assessment items to the new content standards. Based on the results of this evaluation, Oregon determined that there was over 90% of overlap between the old and the new content standards. Oregon has devoted item development resources to writing and field testing approximately 2,600 new mathematics items. These new items assess the 10% of the new content standards that did not overlap with the old content standards and also assess the full depth of knowledge of the new content standards. In addition, Oregon has field tested existing mathematics items that align to the new content standards at different grade-levels.

Background on General Mathematics Assessment

Oregon administered a mathematics assessment to all students in the benchmark grades of 3, 5, 8, and 10 from 1991 until 2004. From 2004 to 2010, Oregon has administered a mathematics assessment to all students in grades 3 – 8 and 10. In February 2010, Oregon received permission from the U.S. Department of Education to change the grade of accountability for high school from grade 10 to grade 11. Starting in 2010-2011, Oregon will administer the mathematics assessment to all students in grade 11 instead of grade 10. In 2009-2010, over 99% of general education mathematics assessments were administered online. In 2010-2011, only visually impaired students who need the Braille version of the assessment will take the mathematics assessment in paper/pencil Braille format. All other students will take the mathematics assessment via OAKS Online. Because fewer than 25 students use the paper-based Braille form, a quantitative analysis of comparability is not feasible.

Background on Alternate Mathematics Assessment

In addition to the work described above, Oregon redesigned its alternate assessment, set achievement standards and conducted an alignment study for mathematics, reading/literature, and science for students with the most significant cognitive disabilities (i.e., the 1%). In 2006–07 Oregon began administering its revised alternate assessments in 3 grade bands (elementary, middle, and high school). Starting in 2009-2010, Oregon administered separate alternate mathematics assessments at each of grades 3 – 8 and high school (as opposed to the three grade band approach). Oregon submitted documentation regarding the technical quality of the alternate mathematics assessment in October 2008. The current documentation addresses both the general and the alternate mathematics assessments.

Summary of Evidence Submitted in Response to Standards and Assessments Peer Review Guidance

The remainder of this letter highlights the evidence and cites documents provided to the U. S. Department of Education supporting the assessment of Oregon's new mathematics content standards under NCLB. The discussion is organized around the critical elements listed in the Peer Review Guidance.

1.1

a) Has the State formally approved/adopted, by May 2003, challenging academic content standards in reading/language arts and mathematics that –

- **cover each of grades 3-8 and the 10-12 grade range, *or***
- **if the academic content standards relate to grade ranges, include specific content expectations for each grade level? and**

Yes. In December 2007, the Oregon State Board of Education adopted the new Mathematics Content Standards for Kindergarten through Grade 8 (Doc. 1.2: State Board Minutes Adopting Content Standards, p. 6; Doc. 1.6: State Board Docket on Content Standards, pp. 1-18). In June 2009, Oregon adopted the new High School Mathematics Content Standards (Doc. 1.2, pp. 27-28; Doc. 1.6, pp. 19-45). To ensure alignment to current research and national and international standards, Oregon's high school content standards were informed by National Council of Teachers of Mathematics (NCTM) Focus in High School Mathematics: Reasoning and Sense Making (October, 2009).

The content standards development process involved review of both national and international content standards as well as standards and frameworks from national organizations. Prior to the development of the new content standards, ODE contracted with WestEd to provide a comprehensive review of all of Oregon's content standards. This review critiqued the depth, breadth and sequencing of Oregon's content standards. Concurrently, ODE staff studied the current research in K-12 mathematics education, including William Schmidt's A Coherent Curriculum: The Case of Mathematics, and Doug Reeve's Power Standards.

The WestEd review and ODE research resulted in the State Board supported goal that Oregon move toward a more focused and coherent set of standards that were anchored in "Core Standards." Core Standards are designed to:

- Focus instruction by identifying the key ideas to be covered in each particular subject and grade. This will allow teachers and students to concentrate on fewer key learning objectives each year, resulting greater depth of teaching and learning.
- Incorporate other content standards in that in-depth understanding of each core standard will imply, and be supported by, understanding of the underlying content standards.
- Carefully articulate clear grade level progression in both knowledge and skills.

The primary source for the K-8 content standards was the NTCM's Focal Points for K-8, which were released just prior to the start of our content standards review process. The high school standards were influenced by the NCTM Focus on High School Mathematics as well as curricular expectations from national organizations such as the National Mathematics Advisory Panel, Achieve and the College Board. ODE staff and the Mathematics Content and Assessment Panel also utilized the highly regarded state math standards, including those of California, Indiana and Massachusetts. These sources were reviewed for their scope and sequence, and also for the clarity of presentation. We also utilized international standards, including the Singapore national math curriculum.

As part of the standards review process ODE staff and the Math Content and Assessment Panel aligned the draft and final standards to highly regarded state standards; to the National Assessment

of Educational Progress Mathematics Framework; to the college and work ready expectations of Achieve and the College Board; and to the content standards of high achieving TIMSS countries. These alignments looked at both the scope and sequence, and also at cognitive demand to provide a balance of skills and strategic and extended thinking to ensure that Oregon's mathematics content standards were challenging, focused, rigorous, and coherent, and that these standards supported the higher expectations of new Oregon Diploma.

English Language Arts standards NA.

b) Are these academic content standards applied to *all* public schools and students in the State?

Yes. Oregon Revised Statute 329.045(3) requires school districts to offer student instruction in mathematics that meets the academic content standards adopted by the State Board of Education and meets the requirements adopted by the State Board of Education. Oregon Administrative Rule 581-022-1210 requires school districts align their curriculum to Oregon state content standards. The Oregon Diploma is based on the state standards and requires students to demonstrate proficiency in the essential skills of reading, writing, and mathematics. These essential skills are embedded in the Oregon content standards and students may use OAKS as one way to demonstrate proficiency.

All students in grades 3-8 and high school are required to have instruction in the new mathematics content standards. Standards-by-Design is an on-line application that allows users to download standards by content area and grade level. Teachers are able to create a tailor-made booklet containing whichever combination of grade level and subject content standards are of interest.

For students with IEPs, Oregon has also developed an extended assessment which is aligned to the content standards for grades 3-8 and high school but that includes content that is reduced in depth, breadth and complexity.

1.3
Are these academic content standards challenging? Do they contain coherent and rigorous content and encourage the teaching of advanced skills?

Yes, particularly the 2007 and 2009 mathematics content standards.

In addition to the high school mathematics content standards, the Oregon State Board of Education also approved a set of Advanced Mathematics Knowledge and Skills designed to help teachers differentiate instruction and extend student learning beyond the high school standards required of all students. The Advanced Mathematics Knowledge and Skills are organized into five disciplines: algebra, trigonometry, discrete mathematics, statistics, and calculus (Doc.1.6, pp. 19 and 27-43). The advanced knowledge and skills are not required for all students and are not assessed on the statewide assessment. The advanced learning expectations are designed to promote differentiated instruction and guidance for teachers of advanced mathematical courses.

The Thomas B. Fordam Foundation rated the new mathematics content standards as B+. In response to the widely held view that previous content standards (both in Oregon and in the U.S. at large) were too numerous and mandate the creation of "mile wide, inch deep" curricula, the NCTM has published "Curriculum Focal Points for Prekindergarten through Grade 8 Mathematics: A Quest for Coherence." Written by a core team of K-12 and postsecondary educators, it was reviewed by at least seventy national experts, ranging from teachers to teacher educators, mathematicians, and researchers. The result is a very well thought out document that clearly lays the ground for a K-8 mathematics curriculum that prepares students for algebra by high school. The publication of this document in September 2006 kicked off the Oregon standards writing process.

To ensure alignment to Oregon adopted new content standards for mathematics in grades K-8 in 2007, following the lead of the National Council of Teachers of Mathematics (NCTM) and their

recommended Curriculum **Focal Points** for Prekindergarten through Grade 8 Mathematics: A Quest for Coherence. NCTM's 2009 **Focus** in High School Mathematics: Reasoning and Sense Making was a key resource in finalizing the High School mathematics content standards.

Based on the 2008 WestEd review (Doc. 4.2) of Oregon's content standards and the Focal Points developed by NCTM, Oregon designed its Core Standards to:

- Focus instruction by identifying the key ideas to be covered in each particular subject and grade. This will allow teachers and students to concentrate on fewer key learning objectives each year, resulting in greater depth of teaching and learning;
- Incorporate other content standards in that in-depth understanding of each core standard will imply, and be supported by, understanding of the underlying content standards;
- Carefully articulate clear grade-level progression in both knowledge and skills.

1.4
Did the State involve education stakeholders in the development of its academic content standards?

Yes. Oregon is required through state statute (ORS 329.045) to involve education stakeholders in the standards review and revision process. ODE engages education stakeholders in the development of its academic content standards through its Content and Assessment Panels, for which membership is determined through a statewide nomination process. Panel membership changes on a rotating basis, as members serve for 3-year terms and are then replaced by new members.

Membership varied from year to year, but the panel generally included membership counts as shown in the table below.

Group	Number of Members
Elementary Teachers	12
Middle School Teachers	8
High School Teachers	12
District Curriculum Staff	2
Higher Education	1
Community Members	1

To help insure geographic diversity among its members, Oregon has been divided into eleven geographic regions. Target membership counts for each region have been identified based on student count and targeted recruitment ensures that panel represents the full spectrum of Oregon's public schools.

K-8 Standards:
Starting in October 2006 a subset of the Oregon mathematics content & assessment panel which consists of Oregon mathematics educators began meeting to craft mathematics content standards that were aligned to the NCTM Focal Points. The panel met again in January, March, May, July, August, and September of 2007 to consider stakeholder feedback and to develop the initial draft of the content standards for K-8. The final draft of the K-8 content standards was crafted at the September 2007 meeting and adopted by the State Board of Education in December 2007 (Doc. 1.2, p. 6; Doc. 1.6, pp. 1-18).

In between these panel meetings, the various drafts were made available on ODE's website. ODE also posted news announcements when each draft was available, sent out messages via the state superintendent's Pipeline newsletter, the statewide curriculum director's listserv, and sent each draft directly to between 600 and 800 teachers around the state. In addition, various ODE representatives gave presentations on the mathematics content standards revision at conferences and board meetings around the state, including:

- Oregon Association for Comprehensive Education
- Closing the Achievement Gap
- Oregon Math Leaders
- Oregon Mathematics Education Council
- Teachers of Teachers of Mathematics
- Oregon Council of Teachers of Mathematics
- Presentations at various district and ESD meetings

ODE collated feedback from its various stakeholders, after which the panel carefully reviewed the feedback prior to updating each draft. Several of those providing feedback commented that they were gratified that their input had been valued and had influenced future drafts. The panel also included in the final draft a comparison to Oregon's 2002 mathematics content standards, the National Assessment of Educational Progress (NAEP), and to international standards as measured by the Trends in International Mathematics and Science Study (TIMSS) (Doc.1.6, pp. 15-16).

High School Standards:
The revision of Oregon's high school mathematics content standards began in September 2008 with an extensive two-day review of the latest national and international mathematics education research. From this work session, a subset of the Oregon mathematics content & assessment panel created the initial draft of the high school content standards. This first draft was posted as a news announcement, advertised in various ODE publications.

Between September 2008 and March 2009, the panel met for six two-day work sessions. ODE staff collected public input on the draft standards, and the panel carefully reviewed the information prior to updating each subsequent version. In between each monthly work session, ODE posted news announcements of the latest drafts and sent out messages via the Superintendent's Pipeline, the Curriculum Director's listserv, and the Oregon Mathematics Teacher Update monthly e-newsletter, as well as to mathematics professional organizations, universities, and community colleges. Various drafts of the high school math standards also underwent external review by members of the National Council of Teachers of Mathematics and Northwest Regional Education Laboratory staff.

In addition, ODE representatives gave presentations on the mathematics standards revision at conferences and board meetings around the state including:

- Oregon Council of Teachers of Mathematics
- Oregon Mathematics Education Council
- Teachers of Teachers of Mathematics Council
- Teacher Standards and Practices Commission
- Oregon Association of Secondary School Administrators (OASSA)/Oregon Elementary School Principals (OESPA) Principal's Conference
- Oregon School Improvement Facilitators
- District, School and Education Service District meetings

The panel's work culminated in the final high school mathematics content standards which were adopted by the State Board of Education in June 2009 (Doc. 1.2, pp. 27-28; Doc. 1.6, pp. 19-45). The final draft represents review and analysis of over twenty different states' mathematics standards and curricular expectations from national organizations such as:

- Achieve, Inc.
- College Board
- National Council of Teachers of Mathematics
- International Baccalaureate
- National Assessment of Education Progress

2.1

Has the State formally approved/adopted challenging academic achievement standards in reading/language arts and mathematics for each of grades 3 through 8 and for the 10-12 grade range? These standards were to be completed by school year 2005-2006.

The Oregon State Board of Education adopted academic achievement standards for mathematics in March 2007, which were used from 2006-2010, to measure student performance relative to the 2002 Oregon Mathematics Content Standards. Beginning in December 2009, ODE began the process of revising its academic achievement standards for mathematics for grades 3-8 and high school, which are scheduled for adoption by the State Board of Education on October 28, 2010.

Below is an outline describing the process used to revise the mathematics academic achievement standards, similar to that used to develop the content standards (Doc. 1.1: Mathematics Achievement Standard Verification Report (2010)):

- Step 1: ODE staff and members of the Oregon Mathematics Content & Assessment Panel reviewed its current 2006 Achievement Level Descriptors (ALDs) as well as external ALDs to get a sense of where Oregon's current achievement standards fell in relation to other standards. Specifically, ODE and the panel reviewed the following external ALDs:
    - Current (2009) NAEP ALDs
    - Pre-2009 NAEP ALDs
    - Current ALDs from states with both high achievement standards and high student performance:
        - Massachusetts
        - Minnesota
        - Washington
        - South Carolina
- Step 2: ODE and the panel reviewed current standard setting best practices published by NAEP and Marianne Perie. Throughout the process of revising its achievement standards, ODE made a point to adhere to these best practices.
- Step 3: The panel drafted Policy Level Definitions, Mathematics Policy Definitions, and Mathematics ALDs for each grade aligned to the new mathematics content standards.
- Step 4: ODE staff reviewed the first drafts of the ALDs, focusing on the Policy Definitions. The panel then modified the drafts in response to ODE staff suggestions.
- Step 5: ODE sought feedback from stakeholders and further modified the draft ALDs and Policy Definitions based on stakeholder input. In particular, ODE sought feedback from the following stakeholder groups:
    - 140 members of Content Panels for all content areas reviewed the draft Policy Definitions
    - 35 members of the Mathematics Content & Assessment Panel reviewed both the draft Policy Definitions and the Mathematics Policy Definitions
    - The Assessment Advisory Committee reviewed both the draft Policy Definitions and the Mathematics Policy Definitions
    - 48 members of the Oregon Council of Teachers of Mathematics (OCTM) Board reviewed both the draft Policy Definitions and the Mathematics Policy Definitions
    - 82 members of Oregon Mathematics Education Council (OMEC) and Teachers of Teachers of Mathematics (TOTOM) reviewed both the draft Policy Definitions and the Mathematics Policy Definitions
- Step 6: ODE submitted the draft Policy Definitions to the Oregon State Board of Education for their review at the January 2010 Board meeting. In March 2010, ODE brought the draft Policy Definitions back to the Board for adoption. At that time, ODE also brought the draft Mathematics Policy Definitions and draft High School Achievement Level Descriptors to the Board for their review.
- Step 7: After receiving the Oregon State Board of Education's approval of the Policy Definitions in March 2010, ODE staff and the Oregon Mathematics Content & Assessment

Panel completed drafts of the Mathematics Policy Definitions and Mathematics ALDs for all grades.

- Step 8: ODE submitted the draft Mathematics Policy Definitions, High School ALDs, and ALDs for Grades 3-8 to the Oregon State Board of Education for adoption at the Board's April 2010 meeting. The Board adopted Mathematics ALDs for all grades in the understanding that the ALDs may be subject to further edits following the Standards Verification Workshop in August 2010.
- Step 9: ODE sent out drafts of the ALDs for all grades to stakeholders, seeking input from content panel members, the Mathematics community, higher education, general Oregon educators groups, Oregon business leaders, and parent groups. ODE then made minor adjustments to the ALDs based on stakeholder feedback prior to the August 2010 Standards Verification Workshop.
- Step 10: ODE used the revised ALDs for the Standard Verification Workshop in August 2010.
- Step 11: Participants in the Standard Verification Workshop made recommendations for the placement of new achievement standards or "cut scores" and also made additional revisions to the ALDs based on their recommended achievement standard placement.
- Step 12: Communication with stakeholders and solicitation of feedback on the clarity and appropriateness of the achievement standards. A survey designed to elicit feedback objectively along with participant comments was open from September 1, 2010 through October 11, 2010. Meetings with school district public affairs managers, mathematics educators, and administrators have been convened for the purpose of getting feedback from a spectrum of stakeholders.

Has the State, through a documented and validated standards-setting process, approved/adopted <u>modified</u> academic achievement standards for eligible students with disabilities? If so, in what subjects and for which grades?

N/A: ODE has not adopted modified academic achievement standards.

Has the State approved/adopted <u>alternate</u> academic achievement standards for students with the most significant cognitive disabilities? If so, in what subjects and for which grades?

ODE implemented a similar process for alternate achievement standards as for the general education achievement standards.

The State has approved and adopted alternate academic achievement level descriptors for students with the most significant cognitive disabilities for Mathematics in grades 3 – 8 and high school (Doc. 1.5: State Board Minutes adopting Alternate Achievement Level Descriptors, p. 2; Doc. 1.8: State Board Docket on Alternate Achievement Level Descriptors). Adoption of alternate academic achievement standards by the state board is scheduled for October 28, 2010. ODE will submit additional documentation following formal adoption.

2.3

1. Do these academic achievement standards (including modified and alternate academic achievement standards, if applicable) include for each content area –

a) at least three levels of achievement, including two levels of high achievement (proficient and advanced) that determine how well students are mastering a State's academic content standards and a third level of achievement (basic) to provide information about the progress of lower-achieving students toward mastering the proficient and advanced levels of achievement; <u>*and*</u>

Yes, the academic achievement standards for both the general and alternate mathematics assessment define four levels of performance: Does Not Meet, Nearly Meets, Meets and Exceeds.

The Mathematics Test Specifications and Blueprints provide both a summary and a detailed description of the general assessment achievement level descriptors for each level of achievement (Doc. 3.1–3.7: 2010-11 Mathematics Test Specifications and Blueprints). The Extended Assessment Achievement Level Descriptors document provides a detailed description of the Extended assessment achievement level descriptors for each level of achievement (Doc. 1.10: Extended Assessment Achievement Level Descriptors).

b) descriptions of the competencies associated with each achievement level; and

The Mathematics Achievement Level descriptors describe the competencies associated with each performance level for each grade (Doc. 1.9: Achievement Level Descriptors). In addition, the General Policy Definitions describe the policy implications of each Achievement Level for all grades and subjects. Finally, the Mathematics Policy Definitions specifically describe the policy implications for mathematics of each Achievement Level for all grades (Doc. 1.9). Achievement Level Descriptors are derived from and aligned with the grade level content standards in a differentiated fashion to describe the level to which all students are expected to know and to be able do. The achievement level descriptors were vetted with stakeholders and adopted by the State Board of Education.

The Extended Assessment Mathematics Achievement Level Descriptors describe the competencies associated with each performance level for each grade for the Extended Mathematics assessment (Doc. 1.10). In addition, the General Policy Definitions describe the policy implications of each Extended Assessment Achievement Level for all grades and subjects. Finally, the Extended Mathematics Policy Definitions specifically describe the policy implications for Extended Mathematics of each Achievement Level for all grades (Doc. 1.10).

c) assessment scores ("cut scores") that differentiate among the achievement levels and a rationale and procedure used to determine each achievement level?

Cut scores determine the level of achievement demonstrated by students. The levels are denoted as Nearly Meets, Meets, and Exceeds. These cut scores, recommended by the Standards Verification Panel in August 2010, were determined through a study of the 2007/2009 Mathematics Content Standards, the Mathematics Achievement Level Descriptors, and Ordered Item Booklets for each grade.

The Mathematics Achievement Level Descriptors were developed by a group of Oregon content experts describing content and skills students should be able to demonstrate for each achievement level as set out by the General Policy Definitions and the Mathematics Policy Definitions using the language found in the content standards. The State Board of Education adopted these achievement level descriptors in April 2010 (Doc. 1.3, p. 4).

The ordered item booklets were chosen at random from the Oregon OAKS item bank to represent a representative cross section of the content standards and a range of difficulty from very easy to very difficult for each grade. Furthermore, in the Ordered Item Booklets, items were tagged with references to nationally recognized norms. The panels came to consensus in selecting items which represent the levels of difficulty associated with the transition from one level to the next, then those items determined the cut scores for that grade (Doc. 1.1). Therefore, the grade level cut scores, as recommended, are the result of a coherent system of content standards, achievement level descriptors, assessment items, and cut scores – all aligned to one another (Doc. 1.1). Adoption of the grade-level academic achievement standards by the state board is scheduled for October 28, 2010. ODE will submit additional documentation following formal adoption.)

The academic achievement standards for the Mathematics Extended Assessment include cut scores that differentiate among the achievement levels as well as the rationale and procedure used to determine each achievement level (Doc. 1.10). Proposed cut scores, prior to final adoption by the State Board of Education, can be found in the Alternate Achievement Standard Setting Summary

(Doc. 1.11). Adoption of alternate academic achievement standards by the state board is scheduled for October 28, 2010. ODE will submit additional documentation following formal adoption.

2. If the State has adopted either modified or alternate achievement standards, has it developed guidelines for IEP teams to use in deciding when an individual student should be assessed on the basis of modified academic achievement standards in one or more subject areas, or assessed on the basis of alternate achievement standards?

Yes. In addition to training test administrators on procedures for administering the Extended assessments, ODE provides guidance for IEP teams to apply when deciding when a student should be assessed using alternate assessment methods and standards. ODE provides this guidance in "Part A: Guidelines for Completion" and "Part B: Oregon Standard Individualized Education Program" of the IEP Guidelines & Form (Doc. 7.7 and Doc. 7.8), in Part 4 of the Extended Assessment General Administration and Scoring Manual (Doc. 7.5), and through the "Guidelines for Statewide Assessment Decision Making for IEP Teams" (Doc., 7.6).

"Part A: Guidelines for Completion" of the IEP Guidelines & Form (Doc. 7.7 and Doc. 7.8) indicates that "The IEP Team should review the most current Statewide Assessment Administration Manual(s)….so all IEP Team members, including the parents, understand the options for and implications of, standard and non-standard administration, including modified administration." Further, "Part B: Oregon Standard Individualized Education Program" of the IEP Guidelines & Form (Doc. 7.7 and Doc. 7.8) includes the list of all assessment options, including alternate assessments. Finally, the Oregon Parent Training and Information Center (OrPTI) was established (in part) to "promote the participation of students with disabilities in statewide assessments and to provide information on the options, implications, and opportunities for such participation for parents and educators." The Assessment Results page on the ODE Web site reports the number and percent of students tested under standard conditions against grade-level standards and with alternate assessments against alternate standards.

2.4
With the exception of students with disabilities to whom modified or alternate academic achievement standards apply, are the grade-level academic achievement standards applied to *all* public elementary and secondary schools and *all* public school students in the State?**

Yes. All students enrolled in grades 3 – 8 and high school must take the OAKS (Doc. 2.5, Section 3.2, p. 4). With the exception of students with disabilities who take the alternate assessment to which alternate achievement standards apply, all public elementary and secondary schools and all public school students are held to the grade-level academic achievement standards. The Individual Student Reports describe the student's performance in terms of the state achievement standards applicable to the student's grade of enrollment (Doc. 2.6: Technical Manual Volume 6: Score Interpretation Guide, Section 3.2, p. 5).

2.5
How has the State ensured alignment between challenging academic content standards and the academic achievement standards?

In January 2010, the Oregon State Board of Education adopted achievement policy definitions which apply to all subjects and all grades. The Oregon mathematics content and assessment panel developed the mathematics achievement level descriptors directly from the mathematics content standards. The achievement level descriptors use language found in the content standards and represent a coherent progression of achievement within each grade level relative to the content students should know and tasks they should be able to perform as they attain higher achievement levels. The achievement level descriptors were reviewed by a wide spectrum of the community, and ODE requested specific stakeholder feedback through a survey administered in Winter 2010. ODE

followed an iterative process in developing the mathematics achievement level descriptors that involved three phases of feedback and revision followed by an additional review by mathematics content and assessment panel members prior to standard verification. The Oregon State Board of Education adopted an initial draft of the Achievement Level Descriptors in April 2010, knowing there would be further edits during the standard verification process; the Board acknowledged that these descriptors are aligned to the content standards which they adopted in 2007 and 2009.

In August 2010, ODE convened a standard verification panel consisting of mathematics educators from K-12 and higher education, parents, business representatives, and educators representing Career and Technical Education (CTE), Special Education (SPED), Talented and Gifted (TAG), and English Language Learner (ELL) populations. Over the course of two and a half days, panel members analyzed assessment items at a full spectrum of achievement levels and item difficulties (RIT scores) which align to the mathematics content standards to determine the appropriate placement of the achievement standards (cut scores) to reflect what a student must know and be able to do in order to reach each achievement level. The panel followed an iterative process that culminated in consensus of the panel regarding placement of the achievement standards. In October 2010, the standard verification panel will present its recommendation to the State Board of Education for adoption of the academic achievement standards, the achievement level descriptors, and the achievement level titles.

If the State has adopted modified academic achievement standards, how has the State ensured alignment between its grade-level academic content standards and the modified academic achievement standards?

N/A. ODE has not adopted modified academic achievement standards.

If the State has adopted alternate academic achievement standards, how has the State ensured alignment between its academic content standards and the alternate academic achievement standards?

The alternate assessment is directly linked to the state content standards. In 2010 this link was confirmed in an alignment study conducted by the Behavioral Research and Teaching department of the University of Oregon (Doc. 7.2: Alignment of Alternate Assessment Mathematics Items (2010)). The alternate achievement standards were derived based on the content standards reduced in depth, breadth and complexity and also based on the structure of the general assessment achievement standards. This process is described in more detail in the Extended Mathematics Assessment technical report (Doc. 2.7: Extended Mathematics Assessment Technical Report, p. 645). An explicit expectation of the development process was that the alternate achievement level descriptor should have appropriate parallels to the general assessment descriptors. The process used in the August 2010 alternate assessment standard setting followed the process used in June 2008. A comprehensive document detailing the development and consequent alignment of the Extended Mathematics Assessment field test items is available in Appendix 1_1: Alignment of Mathematics Items of the Extended Mathematics Assessment Technical Report (Doc. 2.7: Extended Mathematics Assessment Technical Report, Section 1.2).

2.6
For each assessment, including alternate assessments, provide documentation of the standard setting process. Describe the selection of panelists, methodology employed, and final results.

The standard verification process followed by ODE for the mathematics academic achievement standards are described in detail in the Achievement Standard Verification Report prepared by EPIC (Doc 1.1).

The standard setting procedures followed by ODE for the Extended mathematics academic achievement standards are described in detail in Appendix 5: MthStdEvalOutcomes by BRT of the Extended Mathematics Assessment Technical Report (Doc. 2.7, Section 5).

How did the State document involvement of diverse stakeholders in the development of its academic achievement standards and its modified and/or alternate achievement standards, if any?

Oregon engaged its content and assessment panel (comprised of Oregon educators), OMEC, Teachers of Teachers of Mathematics (TOTOM), Higher Education, Community Colleges, the School District Superintendents Listserv, the OCTM, and ODE's Office of Educational Improvement and Innovation (EII) Mathematics mailing list members, administrators and other ODE staff in the development of the achievement level descriptors. Altogether, more than 12,000 Oregonian's had the opportunity to offer input in this process.

The standard verification panel consisting of stakeholders representing a variety of backgrounds had responsibility for recommending the final achievement level descriptors and for recommending achievement level standards. Descriptions of this panel are available in the Achievement Standard Verification Report prepared by EPIC (Doc. 1.1).

Number of Participants in Mathematics Standard Verification Workshop for Each Grade-Level Group

Grade Level Group	Count of Participants
3-4	12
5-6	10
7-8	10
HS	10

The 48 mathematics standard verification panelists represent a diversity of expertise as illustrated in the table below (Note: some panelists are included in more than one group):

Representative Groups	Grades 3-4	Grades 5-6	Grades 7-8	HS
Administrators		1	2	1
Elementary General, Coach	2	3		
Elementary Mathematics	4	3		
English as a Second Language				
High school General, Coach		2		1
High school Mathematics				6
Middle School General, Coach	1	6	5	
Middle School Mathematics	1	8	9	
Members of the public (Parents, Grandparents)	2	1		
Special Education	2	2	2	2
Career and Technical Education				
Talented and Gifted		1	1	
Curriculum Director				
Business			1	1
ESD Partners	2	1	1	1
Higher Education (University, CC)			1	5

Oregon engaged math content specialists, special education teachers with math training and experience, the Office of Assessment and Information Services (OAIS) math assessment specialist

and the manager of psychometrics and validity, and assessment experts from Behavioral Research and Teaching (BRT) of the University of Oregon in the development of the Extended Mathematics Standards and the review of the achievement level descriptors.

Number of Participants in Extended Mathematics Standard Setting for Each Grade-Level Group

Grade Level Group	Count of Participants
3-5	6
6-8	6
HS	6

The 18 mathematics standard setting panelists represent a diversity of expertise as illustrated in the table below (Note: some panelists are included in more than one group):

Representative Groups	Grades 3-5	Grades 6-8	HS
Administrators		1	
Admin. Licensure Program		2	
Elementary Mathematics	5		
High School Mathematics			4
Middle School Mathematics		10	
Special Education	4	5	2
School Support Specialist			
Director/Scorer			
ESD Partners		1	
Higher Education (University, CC)	1		
BRT			

If the State has adopted alternate or modified academic achievement standards, did the State's standards-setting process include persons knowledgeable about the State's academic content standards and special educators who are knowledgeable about students with disabilities?

As described in the narrative and table immediately above, ODE's alternate assessment standard setting process included persons knowledgeable about Oregon's academic content standards and special educators who are knowledgeable about students with disabilities.

OVERVIEW OF THE STATEWIDE ASSESSMENT SYSTEM

Section 3.1.
In the chart below indicate your State's current assessment system in reading /language arts and mathematics in grades 3 through 8 and for the 10-12 grade range using the abbreviations to show what type of assessments the State's assessment system is composed of: (a) criterion-referenced assessments (CRT); or (b) augmented norm-referenced assessments (ANRT) (augmented as necessary to measure accurately the depth and breadth of the State's academic content standards and yield criterion-referenced scores); or (c) a combination of both across grade levels and/or content areas. Please indicate, using the abbreviations shown, the grades and subject areas with availability of native language assessment (NLA) or various alternate assessments (AA-GLAS for an alternate assessment for students with disabilities based on grade-level standards; AA-LEP for an alternate assessment for students with limited English proficiency based on grade-level standards, AA-MAS for an alternate

assessment for eligible students with disabilities based on modified academic achievement standards; and/or AA-AAS for an alternate assessment for students with the most significant cognitive disabilities based on alternate achievement standards).

Chart of State Assessment System Aligned to Content Standards for school year 2010-2011 by Subject, Grade, and Type of Assessment

Grades	**3**	**4**	**5**	**6**	**7**	**8**	**High School (9 – 12)**
Math	CRT	CRT	CRT	CRT	CRT	CRT	CRT
Alternate	AA-AAS	AA-AAS	AA-AAS	AA-AAS	AA-AAS	AA-AAS	AA-AAS
Native Lang.							
Reading	CRT	CRT	CRT	CRT	CRT	CRT	CRT
Alternate	AA-AAS	AA-AAS	AA-AAS	AA-AAS	AA-AAS	AA-AAS	AA-AAS
Native Lang.	NLA pending approval						
Science			CRT			CRT	CRT
Alternate			AA-AAS			AA-AAS	AA-AAS
Native Lang.							

Assessment Options

Since 2004, Oregon has provided mathematics assessments in grades 3 – 8 and high school. Oregon requires that mathematics assessments be administered at all required grades in order to assess the mathematics content standards. In addition, Oregon includes the results of the mathematics assessments as part of the AYP designations. In 2010-2011, Oregon will provide the mathematics assessment through OAKS Online and in a paper-based Braille format for the relatively small number of students with visual impairments who require Braille. In addition, Oregon offers an Alternate mathematics assessment for students with the most significant cognitive disabilities as determined by the student's IEP team. These students are typically working within a specialized curriculum and/or are receiving instruction that has been significantly adapted in order to allow access to grade-level content. Oregon's academic assessment system, made up of OAKS Online, OAKS Braille, and the Alternate 1% assessment, is designed to provide coherent assessment of the mathematics content standards across grades 3 – 8 and high school. Oregon ensures a coherent system through its item writing by Oregon teachers to specifically align items to the content standards, which are also written by Oregon teachers. All items represent current educational practice in Oregon schools (Doc. 2.2: Oregon's Technical Report Volume 2: Test Development, Section 6).

Oregon also provides the OAKS mathematics assessments in side-by-side English-Spanish at all grades for both the online and the Braille format.

3.4

How has the State ensured that its assessment system will provide coherent information for students across grades and subjects?

The Oregon Statewide Assessment System provides a standards-based assessment in mathematics across grades 3-8 and high school. As described in the Assessment Technical Reports, Volumes 1 and 2 (Docs 2.1 and 2.2), the mathematics assessment is designed to provide a coherent picture of student achievement, tightly aligned with grade level academic content standards. The mathematics Test Specifications and Blueprints (Docs 3.1 through 3.7) describe in detail the structure of the mathematics assessment and the theory underlying the progression of skills and knowledge.

a) Has it indicated the relative contribution of each assessment to ensure alignment to the content standards and determining adequate yearly progress?

Please see response under paragraph (b) below.

b) Has the State provided a rational and coherent design that identifies all assessments, including those based on alternate achievement standards and modified achievement standards if any, to be used for AYP?

ODE provides a rational and coherent design that identifies all assessments eligible for inclusion in AYP through its Assessment Inclusion Rules for Accountability Reports document (Doc. 4.11: Assessment Inclusion Rules for Accountability Reports. This document, which is updated annually, provides districts with information about those assessments which are eligible for inclusion in both federal and state accountability calculations.

c) If the State assessment system includes alternate assessments based on alternate or modified achievement standards, has the State provided IEP Teams with a clear description of the differences between assessments based on grade-level achievement standards, assessments based on modified academic achievement standards and assessments based on alternate achievement standards, if applicable, including any effects of State and local policies on the student's education resulting from taking an alternate assessment based on alternate or modified academic achievement standards?

Yes. "Part A: Guidelines for Completion" of the IEP Guidelines & Form (Doc. 7.7 and Doc. 7.8) indicates that "The IEP Team should review the most current Statewide Assessment Administration Manual(s)….so all IEP Team members, including the parents, understand the options for and implications of, standard and non-standard administration, including modified administration." Further, "Part B: Oregon Standard Individualized Education Program" of the IEP Guidelines & Form (Doc. 7.7 and Doc. 7.8) includes the list of all assessment options, including alternate assessments. Finally, the Oregon Parent Training and Information Center (OrPTI) was established (in part) to "promote the participation of students with disabilities in statewide assessments and to provide information on the options, implications, and opportunities for such participation for parents and educators."

3.5

If its assessment system includes various instruments (e.g., the general assessment in English and either a native-language version or simplified English version of the assessment), how does the State demonstrate comparable results and alignment with the academic content and achievement standards?

Comparability of English and English/Spanish Side By Side Mathematics Assessments

Oregon offers a dual-language Spanish/English version of its mathematics assessment. Comparability to the English-only version is demonstrated through the following analyses:

- Differential item functioning of mathematics items across the two language formats (see Doc 4.9)
- Measurement invariance across the two language formats as demonstrated via confirmatory factor analysis (see Doc 4.10)

Evidence of Comparability in Terms of Differential Item Functioning

Mathematics items presented in a dual-language format are contrasted to their English-only versions using the Mantel-Haenszel (MH) procedure (Holland and Thayer, 1988) and the logistic regression procedure (Swaminathan and Rogers, 1990). The following table summarizes the number of items flagged as having negligible, moderate and large DIF under each procedure, where the number of responses in the focal group was 200 or more. Because the number of English language learners decreases by grade, the number of items having at least 200 responses also decreases. For DIF results for items with lower exposure rates, please see Doc 4.9.

	Differential Item Functioning Classifications Dual-Language Mathematics Assessment Number of Items at Each Level of DIF					
	Mantel-Haenszel (ETS DIF classification)			Logistic Regression (Jodoin-Gierl uniform DIF classification)		
Grade	A	B	C	No DIF	Moderate	Large
3	261	34	8	298	2	0
4	238	33	14	279	6	0
5	187	27	5	217	1	1
6	88	8	4	99	1	0
7	84	18	8	108	2	0
8	63	11	7	74	3	1
10	8	1	0	8	0	0

Across grades, the DIF analyses flagged 4.2 percent of items at the ETS "C" level using the Mantel-Haenszel procedure. The logistic regression method identified 0.2% of items as having large DIF and 1.4% as moderate DIF. The relatively low level of differential item functioning provides evidence that translation into Spanish and the side-by-side method of presentation does not introduce construct-irrelevant variance, and supports the comparability of the dual-language assessment.

Evidence of Measurement Invariance across Languages

The establishment of measurement invariance across accommodated conditions of a test's administration is a logical prerequisite for establishing the comparability of the scale. Oregon uses a confirmatory factor analysis approach to determine whether the dual-language and English-only versions of the mathematics assessment measure the same mathematics construct. The results of the study reported in Doc 4.10 support the interpretation of measurement invariance.

3.6

How does the State's assessment system involve multiple measures, that is, measures that assess higher-order thinking skills and understanding of challenging content?

All OAKS test items are associated with both a level of difficulty, or RIT value, and a level of complexity. During item writing, particular standards are targeted and items are written to represent a range of difficulty (easy, medium, or hard) for each level in the range of cognitive complexity (Recall, Skill/Concept, or Strategic Thinking). In some cases, the wording of the standards, mainly the verbs, somewhat limits the possibilities for covering the levels of complexity; but whenever possible all levels are targeted.

An analysis of the entire item bank in September 2010, including all items operational and in-development, shows that ODE has approximately 16% Recall, 68% Skill/Concept, and 16% Strategic Thinking and that the items within each level of cognitive complexity cover a wide range of difficulty (RIT values) (Doc. 4.6: Items, Writs, and Depth of Knowledge). The WestEd Cognitive Complexity (Depth of Knowledge) Ratings for Select Item Pool June 2008 report indicated that in the

2007-08 operational pool, ODE had approximately 20% Recall, 60% Skill/Concept, and 20% Strategic Thinking (Doc. 4.5).

As students interact with the adaptive online test, the test algorithm selects items which guide them to their level of performance with regard to level of difficulty, distributing the items over the score reporting categories and content standards. The nature of the dispersal of cognitive complexity over the levels of difficulty requires students to perform at their personal maximum level of difficulty.

3.7
Has the State included alternate assessment(s) for students whose disabilities do not permit them to participate in the general assessment even with accommodations?

The Extended Assessments are Oregon's alternate assessments that measure a student's achievement in the grade-level content in four content areas: Reading/Literature, Writing, Mathematics, and Science. The Extended Assessments are individually administered performance assessments for students with the most significant cognitive disabilities as determined by the student's IEP team; students should only be considered for the Extended Assessments when they are unable to participate in the general assessments, even with accommodations. These students are typically working within a specialized curriculum and/or are receiving instruction that has been significantly adapted in order to allow access to grade-level content. Student achievement is judged against alternate achievement standards that are set by the state. To use this option, an Extended Assessment must be explicitly identified on the student's IEP as the most appropriate assessment (Doc 7.5; Doc 2.5: Oregon's Technical Report Volume 5: Test Administration, Section 3.2.5). To address the full range of needs for students on IEPs, Oregon provides two administration options for the Extended Assessments: the Standard Extended Assessment and the Scaffolded Extended Assessment which provides additional administrator scripting. Document 7.3 provides protocol and scoring tasks for the Standard Extended Assessment. Document 7.4 provides protocol and scoring tasks for the Scaffolded Extended Assessment.

4.1
For each assessment, including <u>all</u> alternate assessments, has the State documented the issue of validity (in addition to the alignment of the assessment with the content standards), as described in the *Standards for Educational and Psychological Testing* (AERA/APA/NCME, 1999), with respect to <u>*all*</u> of the following categories:

a) Has the State specified the purposes of the assessments, delineating the types of uses and decisions most appropriate to each? Has the State ascertained that the decisions based on the results of its assessments are consistent with the purposes for which the assessments were designed? <u>*and*</u>

Volume 5 of Oregon's Technical Manual describes the purpose of Oregon's assessment system and OAKS in particular:

> Oregon's Assessments of Knowledge and Skills (OAKS) are summative assessments, which are assessments of learning generally carried out at the end of an instructional period. Summative assessments are typically used for program accountability and to assign achievement level scores to students. Summative assessments are not designed as diagnostic tools for student placement or as formative assessments. Given the specific focus and purpose of summative assessments, the OAKS can only be used as part of a collection of evidence regarding the academic needs of individual students. The primary purpose of the OAKS is to ascertain the achievement level of individual students and compare that achievement with the Achievement Standards established by the State Board of Education (Doc 2.5, p. 2).

Additional context regarding the purpose of OAKS can be found in Volume 1 of Oregon's Technical Manual (Doc 2.1: Technical Report Volume 1: Annual Report)

b) Has the State ascertained that the assessments, including alternate assessments, are measuring the knowledge and skills described in the academic content standards and not knowledge, skills, or other characteristics that are not specified in the academic content standards or grade-level expectations? *and*

Please see response under paragraph (c) below.

c) Has the State ascertained that its assessment items are tapping the intended cognitive processes and that the items and tasks are at the appropriate grade level? *and*

The Oregon mathematics assessment is developed to measure only the specific grade level content standards adopted by the state Board of Education. By developing items that measure clearly defined skills and knowledge, and administering items in accordance to a tightly specified blueprint, the mathematics assessment taps the intended knowledge, skills and cognitive processes. See Technical Reports, Volumes 1 and 2 (Docs 2.1 and 2.2), and the Test Specifications and Blueprints (Docs 3.1 through 3.7) for the general approach to test development and administration.

d) Has the State ascertained that the scoring and reporting structures are consistent with the sub-domain structures of its academic content standards (i.e., are item interrelationships consistent with the framework from which the test arises)? *and*

The mathematics assessment domain is carefully described in the 2010-11 Mathematics Test Specifications and Blueprints for each grade level, grades 3–8 and high school (Documents 3.1 – 3.7). Structurally, the Mathematics Core Standards are associated with a Score Reporting Category, its component content standards, and a sample assessment question that serves as an exemplar to provide additional information regarding the content. In addition, the Test Specifications and Blueprints describe the relative proportion of the test that is comprised by each score reporting category and the achievement level descriptors that are based on the associated content and were central to the standard setting process.

As indentified in the Extended Mathematics Test Specifications and Blueprints, the Extended Assessments are similarly designed based on the Score Reporting Categories and grade-level Content Standards (reduced in depth, breadth and complexity). Similarly the alternate mathematics achievement standards are built based on the associated eligible content as well (Doc. 7.1: Extended Mathematics Test Specifications and Blueprints).

e) Has the State ascertained that test and item scores are related to internal or external variables as intended (e.g., scores are correlated strongly with relevant measures of academic achievement and are weakly correlated, if at all, with irrelevant characteristics, such as demographics)?

Evidence of convergent and discriminant validity is provided by the mathematics assessment score correlations with other achievement measures. For example, at the high school level, approximately 9000 Oregon students take both the ACT assessment and the Oregon mathematics assessment. The correlation matrix is provided below:

	Convergent and Discriminant Validity: Correlations between OAKS Mathematics and ACT Subtests Oregon High School Class of 2010					
Test	OAKS Math	ACT English	ACT Math	ACT Reading	ACT Science	ACT Writing
OAKS Math	1.000	0.658	0.801	0.590	0.700	0.403
ACT English		1.000	0.751	0.828	0.770	0.630
ACT Math			1.000	0.679	0.798	0.479
ACT Reading				1.000	0.761	0.530
ACT Science					1.000	0.491
ACT Writing						1.000

N (listwise) = 8991

Convergent validity is demonstrated by the strong correlation with ACT mathematics scores (r = 0.801). Discriminant validity is shown by moderate correlations with ACT reading scores (r = 0.590) and English writing scores (r = 0.403). The correlation between OAKS mathematics and ACT science falls between these extremes (r = 0.700), suggesting a moderate overlap in the constructs measured by the two tests.

A similar pattern of correlations is seen with the SAT section scores in the table below. The OAKS mathematics scores correlate more strongly with the SAT mathematics (r = 0.781) than with critical reading (r = 0.578) or writing (r = 0.566).

	Convergent and Discriminant Validity Correlations between OAKS Mathematics and SAT Sections Oregon High School Class of 2010			
Test	OAKS Mathematics	SAT Mathematics	SAT Critical Reading	SAT Writing
OAKS Mathematics	1.000	0.781	0.578	0.566
SAT Mathematics		1.000	0.692	0.687
SAT Critical Reading			1.000	0.820
SAT Writing				1.000

N (listwise) = 12583

Looking at correlations of students' scores only among OAKS subjects, mathematics shows only a moderate relationship with reading, science and writing. The following table summarizes mathematics correlations with scores in the other three subjects tested.

	Discriminant Validity Correlations between OAKS Mathematics and OAKS Reading, Science and Writing Test Scores Grades 3-8 and 10, 2009-10		
Grade	OAKS Reading	OAKS Science	OAKS Writing
3	0.710		
4	0.721		0.522
5	0.727	0.698	
6	0.730		
7	0.724		0.528
8	0.716	0.725	
10	0.693	0.708	0.535
Average Across Grades	0.717	0.710	0.528

(Only correlations with OAKS mathematics are shown in this table.)

Although the probability of student success on the test is likely vary with key indicators of socio-economic status, Oregon does review each item for differential performance by subgroup to ensure that items function similarly across all subgroups. For a description of Oregon's use of DIF analysis in item selection, please see the Annual Technical Report, Volume 1 (Doc. 2.1, Section 4.1.2).

f) Has the State ascertained that the decisions based on the results of its assessments are consistent with the purposes for which the assessments were designed? *and*

Oregon's assessment program has been in place for nearly two decades, with a primary focus on program evaluation and school accountability. Test design is predicated on summative uses of the results, as opposed to diagnosis of student learning difficulties. The Score Interpretation Guide (Doc. 2.6) is intended to convey the appropriate and inappropriate uses of assessment results.

g) Has the State ascertained whether the assessment produces intended and unintended consequences?

A variety of means are used to monitor the consequences of Oregon's assessment system, including: (1) soliciting input from a wide variety of stakeholder groups, (2) meetings of the state Assessment Advisory Committee, and (3) extensive stakeholder/public input during the development of content standards and achievement standards.

4.2
For each assessment, including all alternate assessments, has the State considered the issue of reliability, as described in the *Standards for Educational and Psychological Testing* (AERA/APA/NCME, 1999), with respect to ***all* of the following categories:**

a) Has the State determined the reliability of the scores it reports, based on data for its own student population and each reported subpopulation? ***and*

In classical test theory it is customary to report a "unitless" reliability coefficient for a set of scores on a test for a particular population of examinees. Green, et al. (1984) proposed a method of deriving an overall "marginal reliability" for test scores obtained on computerized adaptive tests, providing a reliability estimate that is comparable with internal consistency estimates of reliability for traditional test scores.

The formula for marginal reliability is

$$\bar{\rho} = \frac{\sigma_\theta^2 - \bar{\sigma}_\epsilon^2}{\sigma_\theta^2} \quad ,$$

where $\bar{\sigma}_\epsilon^2$ is the average of the values of the measurement error variance, σ_ϵ^2, and σ_θ^2 is the variance of the ability estimates. Applying this formula to the 2009-10 mathematics assessments for each grade and sub-population results in the marginal reliability estimates shown in the following table:

Marginal Reliability Coefficients by Grade and Reported Sub-population
Oregon Mathematics Assessment, 2009-10

Grade	Total Population	Male	Female	Economically Disadvantaged	Students with Disabilities	Limited English Proficient
3	.901	.905	.896	.891	.908	.889
4	.904	.909	.898	.890	.907	.883
5	.898	.903	.891	.880	.891	.865
6	.902	.907	.897	.880	.880	.858
7	.895	.902	.888	.870	.855	.836
8	.911	.915	.905	.884	.867	.856
10	.867	.878	.854	.834	.804	.807

Grade	American Indian/Alaskan Native	Asian/Pacific Islander	African American	Hispanic	Caucasian	Multi-Ethnic
3	.890	.917	.894	.888	.895	.901
4	.891	.919	.893	.882	.900	.910
5	.875	.920	.877	.871	.895	.900
6	.887	.927	.883	.872	.901	.908
7	.869	.920	.861	.857	.894	.896
8	.884	.936	.887	.876	.909	.916
10	.811	.907	.815	.822	.865	.869

Because the marginal reliability formula reflects total score variance, more heterogeneous subpopulations tend to have higher reliability coefficients.

b) Has the State quantified and reported within the technical documentation for its assessments the conditional standard error of measurement and student classification that are consistent at each cut score specified in its academic achievement standards? *and*

Conditional standard errors of measurement at each mathematics cut score are shown in the following table, excerpted from the Annual Technical Report, Volume 1 (See Doc 2.1, Section 5.3).

Conditional Standard Error of Measurement by Achievement Standard Oregon Mathematics Assessment, 2009-10						
	Nearly Meets		Meets		Exceeds	
Grade	Standard	Conditional SEM	Standard	Conditional SEM	Standard	Conditional SEM
3	201	3.35	205	3.37	217	3.61
4	208	3.36	212	3.36	225	3.54
5	214	3.35	218	3.34	229	3.45
6	216	3.38	221	3.34	232	3.43
7	221	3.38	226	3.33	238	3.42
8	225	3.35	230	3.32	241	3.43
10	231	3.37	236	3.33	246	3.40

Conditional SEMs are similar across all three achievement standards, which is one of the major advantages of Oregon's computer adaptive mathematics assessment.

Individual score reports and class roster reports, illustrated in the Score Interpretation Guide (Doc 2.6), provide conditional SEMs for each reported scale score, which gives report users an indication of the precision with which scores may be interpreted.

Data on classification consistency using the latent distribution method described by Guo (2006) are provided in the following table:

Grade	Observed and Expected Classifications Agree	Observed: Does Not Meet Standard; Expected: Meets Standard	Observed: Meets Standard; Expected: Does not Meet Standard
3	91.2%	4.8%	4.0%
4	91.4%	4.7%	3.9%
5	91.4%	4.8%	3.8%
6	91.4%	4.7%	3.8%
7	90.6%	5.2%	4.2%
8	91.1%	4.8%	4.0%
10	90.1%	5.9%	4.1%

c) Has the State reported evidence of generalizability for all relevant sources, such as variability of groups, internal consistency of item responses, variability among schools, consistency from form to form of the test, and inter-rater consistency in scoring?

For tests developed according to item response theory, internal consistency of responses is measured by item fit statistics. Good fit means that responses to the item are determined by overall proficiency in the subject and that, when proficiency is taken into account, there is no covariance

among items. That is, when an item fits the model, responses to the item are a function of subject matter knowledge, not of construct irrelevant knowledge. The State examines Rasch Winsteps fit statistics using industry standard criteria for item rejection. Tests and forms constructed from items that fit the model yield scores that are comparable across years and populations. See Annual Report, Volume 1, Section 4.2 (Doc 2.1) for a detailed description of the use of item fit statistics.

4.3

Has the State ensured that its assessment system is fair and accessible to all students, including students with disabilities and students with limited English proficiency, with respect to each of the following issues:

a) Has the State ensured that the assessments provide an appropriate variety of accommodations for students with disabilities? *and*

Consistent with the Individuals with Disabilities Act of 2004, all students with disabilities are eligible to participate in the OAKS. The student's Individualized Education Program team, which includes the student's parents or guardian, makes the decision regarding the most appropriate method for a student with disabilities to participate in testing. Each student must be considered individually and not merely on the basis of the student's disability category (Doc. 2.5, Section 3.2.4).

To support students with disabilities taking the standard OAKS administration, Oregon publishes an Accommodation Manual and Tables containing a comprehensive list of state-approved accommodations that students may use when testing. Accommodations appearing on these tables have been approved by the Oregon Accommodations Panel and do not compromise the learning expectations, construct, grade-level standard, or measured outcome of OAKS. In Oregon, any student is eligible to use an accommodation, including both students with and without disabilities, and testing with state-approved accommodations is considered a standard administration (Doc. 2.5, Section 3.2.2).

b) Has the State ensured that the assessments provide an appropriate variety of linguistic accommodations for students with limited English proficiency? *and*

LEP students are given equal opportunity to participate in the OAKS, with districts choosing the appropriate testing option for each LEP student individually for each assessment on the basis of what is in the best interest of the student (Doc. 2.5, Section 3.2.3).

LEP students may use accommodations from the Accommodations Manual identified by the school district as appropriate for the individual student and assessment (Doc. 5: Oregon Accommodations Manual). Examples of accommodations designed to support LEP students in taking OAKS include translated English/Spanish versions of OAKS Math, Science, and Social Sciences (Doc. 2.5, Section 3.2.2).

c) Has the State taken steps to ensure fairness in the development of the assessments? *and*

Oregon's item writers are typically Oregon teachers who have received training in item construction, are familiar with test specifications, and have demonstrated skill in writing items that pass both content and sensitivity panel review. To ensure fairness and sensitivity of Oregon's test items, Oregon specifically instructs its item writers to ensure that items reflect the diversity of Oregon students; avoid emotionally-charged issues such as death, violence, drug and alcohol abuse, criminal activities, or the occult; and are free of ethnic, gender, political, and religious bias (Doc. 2.2, Section 6.1). After items are written they are reviewed by Oregon's Assessment Sensitivity Panel which examines items for sources of bias (Doc. 6.3: Oregon Administrative Rule # 581-022-0620: Test Development). Specifically, the Sensitivity Panel ensures that items:

- present racial, ethnic, and cultural groups in a positive light
- do not contain controversial, offensive, or potentially upsetting content

- avoid content familiar only to specific groups of students because of race or ethnicity, class, or geographic location
- aid in the elimination of stereotypes
- avoid words or phrases that have multiple meanings (Doc. 2.2, Section 6.2)

After items have been administered, a differential item functioning (DIF) analysis is conducted. Items exhibiting DIF are referred to content specialists for further review (Doc. 2.2, Section 8.1).

Oregon conducts DIF analyses in two contexts: (1) to detect potential bias affecting scores for each reported subpopulation and (2) to examine the fairness of bilingual assessments in mathematics and science. See Oregon's Technical Manual Volume 1: Annual Report (Doc. 2.1, Sections 2.4 and 4.1.2) for a detailed discussion of DIF analyses across all subgroups. The use of DIF to examine comparability across languages is reported in Doc 4.9.

d) Does the use of accommodations and/or alternate assessments yield meaningful scores?

Yes. Oregon defines an accommodation as a practice or procedure in presentation, response, setting, and timing or scheduling that, when used in an assessment, provides equitable access to all students. The Accommodations Manual and Tables provide a comprehensive list of state-approved accommodations that students may use when testing (Doc. 5). Accommodations appearing on these tables have been approved by the Oregon Accommodations Panel and do not compromise the learning expectations, construct, grade-level standard, or measured outcome of OAKS. Oregon continually assesses the needs of its students and addresses those needs as they arise. Accommodations are recommended, evaluated, and made available on an ongoing basis by ODE through a formal review process involving the Oregon Accommodations Panel. The Accommodations Panel uses a combination of policy, judgments, and research to ensure that accommodations provide valid scores that allow all students to demonstrate what they know and can do. (Doc 2.5, Section 3.2.2).

4.4
When different test forms or formats are used, the State must ensure that the meaning and interpretation of results are consistent.

a) Has the State taken steps to ensure consistency of test forms over time?

Tests are composed of items linked to the scale, so that scores are comparable across time. To ensure that the OAKS Online item pools remain stable over time, each pool contains a percentage of items, typically approximately 80%-90%, that have been previously used operationally and are psychometrically sound (Doc. 2.2, Section 8.2). Each OAKS Online content assessment is linked to the scale using bank values for each item as anchors. In adaptive testing, calibrating each item to the scale is crucial to assuring that test scores retain consistent meaning across time. To compute the difficulty of new items, Oregon uses a sparse matrix calibration method using all bank items together as an anchor. Furthermore, Oregon's field testing process is designed to ensure consistency of score meaning over time (Doc. 2.1, Section 4.1).

b) If the State administers both an online and paper and pencil test, has the State documented the comparability of the electronic and paper forms of the test?

Over the past three years, Oregon has enhanced its online assessment with universal design features, eliminating the need for a paper-based fixed form assessment. In 2010-11, the Braille version of the mathematics assessment will be administered to approximately 25 visually impaired students.

4.5

Has the State established clear criteria for the administration, scoring, analysis, and reporting components of its assessment system, including all alternate assessments, and does the State have a system for monitoring and improving the on-going quality of its assessment system?

Oregon describes OAKS test administrator training requirements, test scheduling and administration procedures, and security procedures in Oregon Administrative Rule # 581-022-0610 (Doc. 6.1) and in its Technical Report Volume 5: Test Administration (Doc 2.5). Oregon specifies the scoring, reporting, and quality control procedures for American Institutes for Research, the contractor for OAKS Online, in the contract statement of work, detailed requirements documents, and weekly meeting summaries.

Oregon solicits feedback on the quality and effectiveness of its assessment system through: (1) quarterly meetings of the Assessment Advisory Committee, (2) contracted studies and evaluations of the system by measurement experts, (3) annual meetings of the Technical Advisory Committee, (4) meetings of the assessment and content panels that are charged with keeping the assessments aligned with the content standards, and (5) frequent communication with district testing coordinators as issues come up. The assessment contractors also play a critical role in maintaining the quality of the assessment system (Doc. 2.2, Section 6.2, p. 18 and Appendix, p. A-1).

4.6

Has the State evaluated its use of accommodations?

a) How has the State ensured that appropriate accommodations are available to students with disabilities and students covered by Section 504, and that these accommodations are used in a manner that is consistent with instructional approaches for each student, as determined by a student's IEP or 504 plan?

Students' instructional accommodations are documented as part of the service summary requirement of the IEP. In addition, assessment accommodations deemed necessary and appropriate for each student are documented on the IEP in association with the type of assessment selected. IEP teams select assessment accommodations based on student need as demonstrated in the instructional setting, however, in Oregon, only those accommodations selected from the state's table of approved accommodations may contribute to a valid score for use with an assessment (Doc. 5). Since 1998, all students in Oregon have been permitted to use any accommodation listed among the state's approved accommodations. As a result of this permissive structure surrounding approved accommodations and because Oregon's approved accommodations are approved only after they have been determined not to impact the construct of the assessment, Oregon has not documented the use of accommodations at the state level. Starting in the 2007-2008 academic school year, however, in accordance with updates to the federal regulations released by USED in April of 2007, schools and districts have been required to report the use of approved accommodations specifically for students with disabilities. In its initial phase as a state requirement, districts report only whether a student has received an approved accommodation. Although districts are not currently required to report the type of accommodation administered to a student with disabilities, starting in 2010-11, districts may elect to identify up to six specific accommodations per student using new four-digit accommodation codes. This option is in addition to the continued requirement that districts report whether a student with disabilities received one or more accommodation.

b) How has the State determined that scores for students with disabilities that are based on accommodated administration conditions will allow for valid inferences about these students' knowledge and skills and can be combined meaningfully with scores from non-accommodated administration conditions?

Since 1998, the state of Oregon has maintained the Oregon accommodations panel which consists of experts in education, assessment, and special education and meets quarterly to make decisions

regarding accommodations requests that are submitted by the field. ODE selects experts to serve on the accommodations panel based on nomination and a submission of qualifications to be sound decision makers, understand the use of and need for technical accuracy, and for their familiarity with the practical needs and uses of accommodations in the field. ODE facilitates the panel to ensure that decisions are made based on current research, fit within the state's assessment system, professional judgment and knowledge of the population of students with disabilities who are most likely to rely on accommodations to access the assessment. ODE documents and maintains the panel's decisions to ensure consistency among decisions and to facilitate review based on updates to research and procedure nationally. The state relies on guidance as provided by national warehouses such as NCEO and CCSSO. Approved accommodations are defined as practices and procedures in presentation, response, setting, and timing or scheduling that, when used in an assessment, provide equitable access to all students. Accommodations do not change the learning expectations, construct, grade-level standard, and/or measured outcome of the assessment. Accommodations are defined as distinctly different from modifications which are considered the range of instructional practices and procedures that compromise the intent of the assessment through a change in the learning expectations, construct, grade-level standard, and/or measured outcome of the assessment. Only assessments administered with approved accommodations (as opposed to modifications) may yield a valid score for a statewide assessment (Doc. 5).

c) How has the State ensured that appropriate accommodations are available to limited English proficient students and that these accommodations are used as necessary to yield accurate and reliable information about what limited English proficient students know and can do?

In addition to the provision of side by side translated versions of the statewide assessment, students who have limited English proficiency also have access to the same range of approved accommodations as do all other students. A variety of approved accommodations refer to guidance surrounding the provision of translated materials for students with limited English proficiency (Doc. 5).

d) How has the State determined that scores for limited English proficiency students that are based on accommodated administration circumstances will allow for valid inferences about these students' knowledge and skills and can be combined meaningfully with scores from non-accommodated administration circumstances?

Accommodations for students who have limited English proficiency are determined in the same manner and by the same professional group of experts as defined above.

The side-by-side English-Spanish mathematics tests are carefully developed and reviewed to avoid construct-irrelevant variance due to the translation process. Translations of test items are conducted by professional translation companies. Translated items are reviewed by a panel of bilingual community members and educators who check for appropriate language for age levels and regional language groups. (See Doc. 2.2, Section 2.4 for a further description of the process for developing the dual-language tests).

After the dual-language tests are administered, responses to translated items are analyzed for evidence of DIF. Items that exhibit moderate or significant DIF are reviewed to ensure that the translation process or other construct-irrelevant factors did not affect the difficulty of the item. See Oregon's Technical Manual Volume 1: Annual Report (Doc. 2.1, Sections 2.4 and 4.1.2) for a detailed discussion of DIF analyses.

e) What actions has the State taken to monitor the implementation of accommodations during testing?

As described previously, since 1998, all students in Oregon have been permitted to use any accommodation listed among the state's approved accommodations (Doc. 5). As a result of this

permissive structure surrounding approved accommodations and because Oregon's approved accommodations are approved only after they have been determined not to impact the construct of the assessment, Oregon has not typically documented the use of accommodations at the state level. Starting in the 2007-2008 academic school year, however, districts have been required to report the use of approved accommodations specifically for students with disabilities. In its initial phase as a state requirement, districts report only whether a student has received an approved accommodation. Starting in 2010-11, districts will also have the option to report up to six specific accommodations per student using new four-digit accommodation codes. Availability of specific accommodations is not monitored beyond this reporting requirement.

5.1
Has the State outlined a coherent approach to ensuring alignment between each of its assessments, or combination of assessments, based on grade-level achievement standards, and the academic content standards and academic achievement standards the assessment is designed to measure?

Oregon ensures alignment between each of its mathematics assessments based on grade-level achievement standards, and the academic content standards and academic achievement standards the assessment is designed to measure through systematic processes for item development, review, and calibration augmented by external independent alignment analyses including: External independent alignment of a majority of the test items to academic content standards with independent assignment of depth of knowledge (Doc. 4.2), and External independent blind alignment of a random sample of test items to which ODE assigned academic content standards and depth of knowledge (Doc. 4.3).

Oregon manages the alignment of its assessments and academic content standards by controlling every step of test development, including development of test specifications, item writing, content and bias review, field testing, review of item performance, setting of achievement standards, grade-level pool development, delivery system specifications, and computer adaptive testing parameters. The "Life of an Item" diagrams in the Mathematics Test Specifications and Blueprints (Docs 3.1 – 3.7) show the major steps in the process of test development.

In 2008, ODE contracted with external experts for an independent alignment analysis. WestEd was selected through Oregon Procurement to conduct an alignment of ODE's 2007-08 mathematics test items with the concepts and skills reflected in the 2007 Oregon mathematics content standards for grades 3–8. In May 2008, WestEd completed a crosswalk between the 2002 and the 2007 mathematics content standards Doc. 4.1: Crosswalk A: Oregon Mathematics, 2002 Grade Level Standards to 2007 Content Standards (2008)). ODE used this crosswalk as a guide to align new mathematics items to the 2007 Oregon mathematics content standards during the item development process. In June 2008, WestEd completed its alignment study analyzing the alignment of 2,260 operational mathematics items with the concepts and skills reflected in the 2007 Oregon mathematics content standards for grades 3–8 (Doc. 4.2: Oregon Mathematics Alignment Study Final Report (2008)). The findings presented in that report informed ODE about the alignment status of the Grades 3–8 OAKS Mathematics item pools and guided further test development. ODE applied the system described by WestEd to conduct further alignment analysis for the high school OAKS Mathematics item pools compared to the 2009 Oregon mathematics content standards. In 2010, ODE's Technical Advisory Committee recommended another blind independent alignment of a random sample of new test items developed since West Ed's (2008) study. The Educational Policy Improvement Center (EPIC) in Eugene, Oregon, was contracted for an external independent blind alignment of a random sample of 296 test items to which ODE assigned academic content standards and depth of knowledge. (Doc. 4.3) EPIC's alignment study found a strong degree of categorical concurrence providing further evidence that the ODE item development and review procedure maintains fidelity with the State Board-adopted mathematics content standards.

The 2010-11 Mathematics Test Specifications and Blueprints (Docs 3.1 – 3.7) describe how the content standards will be assessed through OAKS Mathematics at each grade level, grades 3– 8 and high school. The test specifications indicate the relative weight of sub-domains (score reporting categories), and sample items illustrate the type of skill measured. As part of its ongoing technical process, Oregon monitors the breadth and depth of tests completed by students against the test specifications (Docs 3.1 – 3.7).

Item Protocols/Training
Item writing is carried out by Oregon teachers, managed by the ODE mathematics assessment specialist. ODE provided item writers with the 2007 and 2009 mathematics content standard elements during the item writing workshop conducted in July – December 2009 that laid out for the item format and number of questions to be written for each content standard element, item difficulty, and cognitive complexity.

To ensure quality item writing, potential item writers are asked to submit an application that includes three items they have written, indicating the targeted content standard.

Items are reviewed for alignment with the content standards (including the content standard element level) during the item writing workshop through a peer-editing process. The Oregon mathematics content and assessment panel then reviews the items for alignment with grade-specific content standards and the assigned level of cognitive demand. Next, the Oregon sensitivity panel reviews items for potential bias from a variety of perspectives. The final step prior to field testing items is for a blind key and alignment review by a mathematics content expert and ODE's mathematics content specialist. Oregon's Technical Manual Volume 2: Test Development provides additional information about ODE's item development process (Doc. 2.2, Section 6).

Has the State outlined a coherent approach to ensuring alignment between each of its assessments, or combination of assessments, based on modified achievement standards and the academic content standards and academic achievement standards the assessment is designed to measure?

N/A: ODE has not adopted modified academic achievement standards.

Has the State outlined a coherent approach to ensuring alignment between each of its assessments, or combination of assessments, based on alternate achievement standards and the academic content standards and academic achievement standards the assessment is designed to measure?

Oregon's alternate assessment items are developed based on the state's approved content standards for each of four subject areas (Reading, Writing, Mathematics, and Science). Grade level items are developed using a systematic process of reduction in depth, breadth, and complexity by a team of research-level experts. The Extended Mathematics Test Specifications and Blueprints describes this process in greater detail (Doc. 7.1). This development is conducted in conjunction with processes similar to the general assessment that include feedback from practitioners, field- and pilot-testing, as well as relevant stakeholders.

Following any development (and review) of assessment items for Oregon's alternate assessment, an alignment (linking) study is conducted to determine the link of the items and assessments to grade level content standards. This study is conducted via external review by a panel of educators. The most recent alignment (linking) study was conducted following development of the updated math alternate assessment items (based on the 2007 math content standards) in December 2009.

The results of this study are described in the 2010 report on the alignment of alternate assessment mathematics items (Doc. 7.2). This study evaluated alignment and links for all items at each of the

assessed grade levels to the content standards, and an alignment score was determined based on the strength of the link between the item and the content standards.

5.2
Are the assessments and the standards aligned comprehensively, meaning that the assessments reflect the full range of the State's academic content standards? Are the assessments as cognitively challenging as the standards? Are the assessments and standards aligned to measure the depth of the standards? Does the assessment reflect the degree of cognitive complexity and level of difficulty of the concepts and processes described in the standards?

Item writing for the state assessment includes an analysis of cognitive complexity. Oregon uses the following codes based on Bloom's taxonomy: Recall, Skill/Concept (Basic Application), and Strategic thinking. While Oregon does therefore consider cognitive complexity as part of item writing and item review, it does not yet include cognitive complexity as part of the test design and administration process. Oregon plans to incorporate this additional dimension once item writing and field testing yield a sufficient distribution of items.

In addition, in September 2010 ODE contracted with EPIC to conduct an item-level analysis of the alignment of a sample of OAKS Mathematics test items to the 2007 and 2009 Mathematics Content Standards. EPIC found that Oregon's mathematics assessments generally address the breadth of the strand content as operationalized in the grade level content standards (Doc 4.3: EPIC Alignment Study (2010), p. 1 and 12).

If the State has implemented an alternate assessment based on modified academic achievement standards, does the assessment reflect the full range of the State's academic content standards for the grade(s) tested? What changes in cognitive complexity or difficulty, if any, have been made for assessments based on modified academic achievement standards?

N/A: ODE has not adopted modified academic achievement standards.

If the State has implemented an alternate assessment based on alternate academic achievement standards, does the assessment show a clear link to the content standards for the grade in which the students tested are enrolled although the grade-level content may be reduced in depth, breadth or complexity or modified to reflect pre-requisite academic skills?

Oregon has implemented an alternate assessment based on alternate academic achievement standards and provides a comprehensive discussion with supporting data in both the 2010 report on the alignment of alternate assessment mathematics items (Doc. 7.2) and the Extended Mathematics Assessment Technical Report (Doc. 2.7) The 2010 alignment report outlines the process for establishing alignment (or linking) as summarized in Oregon's response to critical element 5.1. Links were established based on the discernment of the link between each item and the grade level content standard; the correspondence between standards assessed and represented in the classroom; and the depth of knowledge assessed by a given item. Of the 236 items reviewed for links to grade level content, 234 were found to align at a level of either 2 or 3 (on a scale of 0 – 3). On a scale of 0 – 3, the average linking across all 236 items under review was 2.8 (Doc. 7.2, p. 7).

5.3
Are the assessments and the standards aligned in terms of both content (knowledge) and process (how to do it), as necessary, meaning that the assessments measure what the standards state students should both know and be able to do?

The state's content standards do not specifically identify a distinction between content and process. Oregon does include questions that address a variety of depths of knowledge.

The 2008 WestEd alignment study of grade 3 – 8 operational items found that all but about 4% of that item set were aligned to the 2007 Grade 3 – 8 Content Standards (Doc. 4.2, p. 8). ODE used the WestEd recommendations and their Crosswalk document (Doc.4.1) to align these existing items to the new standards. Items which were aligned to later grades were field tested in those later grades in Winter 2009-10; and those items which were aligned to earlier grades will be field tested in Winter 2010-11.

Following the same methodology with the High School items and the 2009 High School Content Standards, ODE had content experts analyze the 2002 and 2009 standards and summarize their findings with a crosswalk document for High School standards (Doc. 4.7: Authorization for Assessment of New High School Standards; Doc. 4.8: Oregon Mathematics Cross Walk 2002 Grade Level Standards to 2009 High School Content Standards). ODE used this crosswalk document to align the existing high school items to the new standards. Although most existing high school items aligned to the new high school standards, approximately 80 existing high school items aligned to the new content standards at earlier grades. A minor percentage of items from all grades did not align to any of the new content standards and will neither be used operationally or for field test purposes beginning in 2010-11.

For items from all grades (3 – 8 and high school) originally written to the 2002 Oregon mathematics content standards, the 2008 WestEd alignment study findings (Doc. 4.1 and Doc. 4.2) with respect to Depth of Knowledge are summarized as follows:

Grade	Recall	Skill/Concept	Strategic Thinking	Grade Totals
3	128	220	86	434
4	101	238	66	405
5	90	235	82	407
6	50	233	72	355
7	43	221	61	325
8	38	194	102	334
HS	78	260	65	403
Totals	528	1601	534	2663
% of Total	20	60	20	100

Item writers in July 2007 and in July – December 2009 purposefully wrote items to align to particular content standards, for each content standard covering a range of difficulty from easy to difficult, and equally covering Recall, Skill/Concept, and Strategic Thinking. The resulting overall dispersion of items by Cognitive Demand is now 16 % Recall, 66% Skill/Concept, and 19% Strategic Thinking, which indicates a trend toward more items at the higher cognitive levels (Doc. 4.6).

What changes in test structure or format, if any, have been made for assessments based on modified academic achievement standards?

N/A: ODE has not adopted modified academic achievement standards.

5.4

Do the general assessments and alternate assessments based on modified achievement standards if any, reflect the same degree and pattern of emphasis as are reflected in the State's academic content standards?

The Test Specifications and Blueprints (Docs 3.1 through 3.7) provide a detailed description of how fidelity to the content standards is maintained.

5.5

Do the assessments yield scores that reflect the full range of achievement implied by the State's academic achievement standards?

Oregon's 2010-11 Mathematics Test Specifications and Blueprints (Doc. 3.1–Doc. 3.7) provide:

- A comprehensive description of the procedures used to develop tests including the extensive role of stakeholders in the processes
- Comprehensive test blueprints that describe allocation of items by strand and difficulty for paper and computer adaptive tests
- A plan to implement item writing and test specifications that include explicit expectations for distribution of cognitive complexity

Starting in 2010-11, ODE will include machine-scored graphic response items operationally on its Mathematics tests. Machine-scored graphic response items ask students to plot their answers on a grid and allow students to demonstrate their knowledge and skills in a more complex fashion than permitted by multiple choice items. These items are scored using a rubric and may be weighted to be worth multiple points (Doc. 2.2, Section 2.1.3, p. 4).

5.6

Assessment results must be expressed in terms of the achievement standards, not just scale scores or percentiles.

Oregon's Individual Student Reports present student results as a scale score bracketed by one standard error of measurement (the SEM) and describe student performance in terms of the state achievement standards applicable to the student's grade of enrollment (Doc. 2.6, Section 3.2, p. 5). Similarly, the class roster reports presents a class roster of the total test scale score and strand (subdomain) scale scores bracketed by 1 SEM numerically for each student. Each student is designated as meeting or not meeting the state achievement standards, and each score is accompanied by a state percentile rank (Doc. 2.6, Section 3.3, p. 7).

5.7

What ongoing procedures does the State use to maintain and improve alignment between the assessments and standards over time?

Oregon maintains alignment through a continuous improvement process that links item writing through an evaluation of completed tests. The process begins each year with assessment content specialists analyzing the item bank and reviewing content converge in terms of item depth and breadth as established by the content standards and test specifications. Based on a gap analysis between item pools and test specifications, Oregon plans its item writing sessions. The item writing sessions engage Oregon educators in a process of writing items that are specifically aligned to Oregon standards based on the needs identified in the gap analysis. The item writing process is described in greater detail in Oregon's Technical Report Volume 2: Test Development (Doc. 2.2). The combination of the pool analysis and completed tests provides a comprehensive view of the alignment between the tests and the standards.

6.1

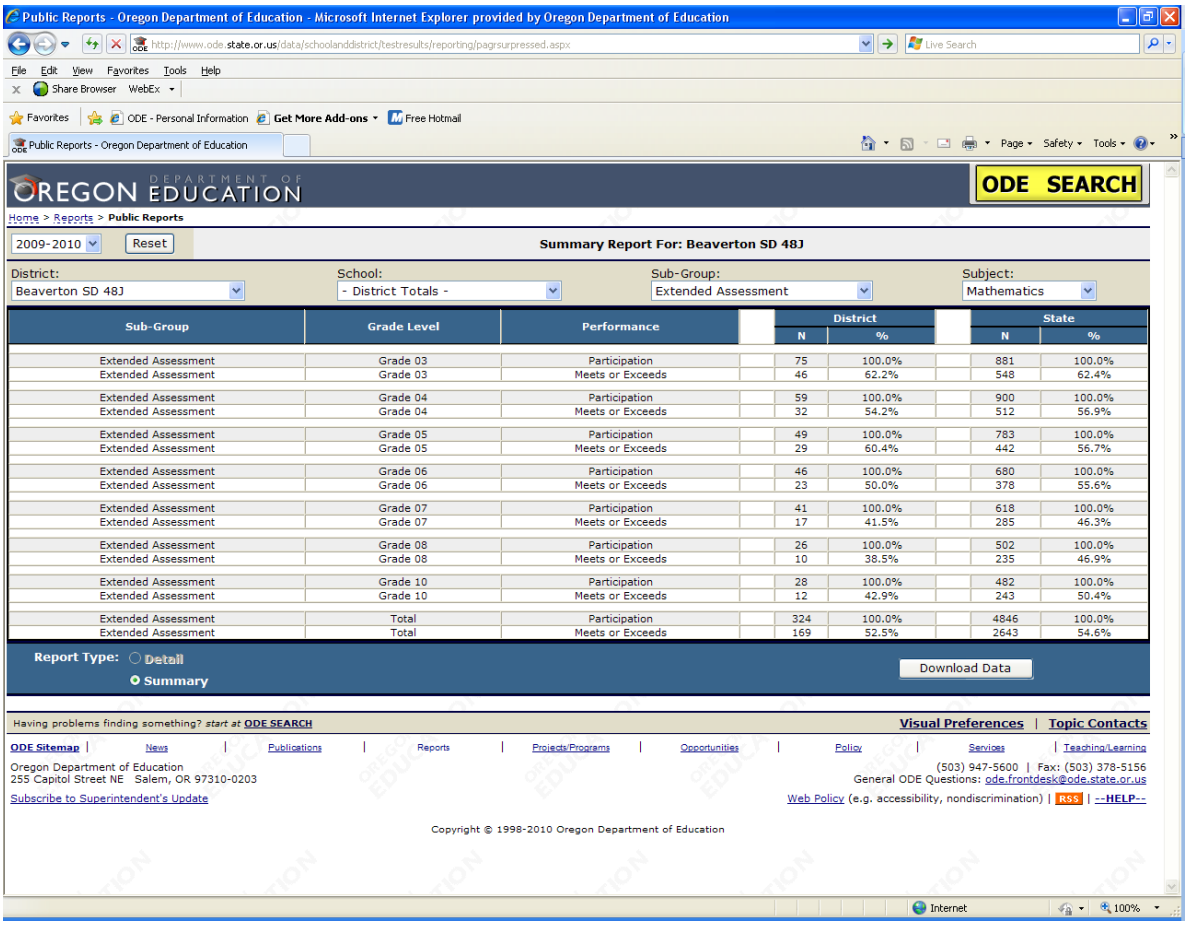
1. Do the State's participation data indicate that all students in the tested grade levels or grade ranges are included in the assessment system (e.g., students with disabilities, students with limited English proficiency, economically disadvantaged students, race/ethnicity, migrant students, homeless students, etc.)?

In 2004-2005, Oregon implemented a participation measure based upon enrollment. Each subgroup's membership on the first Monday in May is used as the denominator.

Participation in the mathematics assessment is quite high, ranging from 98.3% (students with disabilities) to 99.4% (Asian/Pacific Islander). Participation rates by subgroup are provided in the Annual Technical Report (Doc 2.1).

2. Does the State report separately the number and percent of students with disabilities assessed on the regular assessment without accommodations, on the regular assessments with accommodations, on an alternate assessment against grade-level standards, and, if applicable, on an alternate assessment against alternate achievement standards and/or on an alternative assessment against modified academic achievement standards?

Participation rates for students with disabilities assessed on the regular assessment and the alternate assessment against alternate achievement standards are reported separately on Oregon's public assessment reports Web site. The following screen image provides an example of this reporting functionality.



Sub-Group	Grade Level	Performance	District N	District %	State N	State %
Extended Assessment	Grade 03	Participation	75	100.0%	881	100.0%
Extended Assessment	Grade 03	Meets or Exceeds	46	62.2%	548	62.4%
Extended Assessment	Grade 04	Participation	59	100.0%	900	100.0%
Extended Assessment	Grade 04	Meets or Exceeds	32	54.2%	512	56.9%
Extended Assessment	Grade 05	Participation	49	100.0%	783	100.0%
Extended Assessment	Grade 05	Meets or Exceeds	29	60.4%	442	56.7%
Extended Assessment	Grade 06	Participation	46	100.0%	680	100.0%
Extended Assessment	Grade 06	Meets or Exceeds	23	50.0%	378	55.6%
Extended Assessment	Grade 07	Participation	41	100.0%	618	100.0%
Extended Assessment	Grade 07	Meets or Exceeds	17	41.5%	285	46.3%
Extended Assessment	Grade 08	Participation	26	100.0%	502	100.0%
Extended Assessment	Grade 08	Meets or Exceeds	10	38.5%	235	46.9%
Extended Assessment	Grade 10	Participation	28	100.0%	482	100.0%
Extended Assessment	Grade 10	Meets or Exceeds	12	42.9%	243	50.4%
Extended Assessment	Total	Participation	324	100.0%	4846	100.0%
Extended Assessment	Total	Meets or Exceeds	169	52.5%	2643	54.6%

6.2

1. What guidelines does the State have in place for including all students with disabilities in the assessment system?

Both the Individuals with Disabilities Act of 2004 (IDEA) and OAR 581-022-0612: Exception of Students with Disabilities from State Assessment Testing (Doc. 6.2) require that individuals with disabilities be given equal opportunity to participate in and benefit from any program or activity customarily granted to all individuals with appropriate adaptations. Therefore, all students with disabilities are eligible to participate in the OAKS. In September 1999, ODE Executive Memorandum 060-1999-2000 was issued, which explained the policy of the State Board of Education regarding

participation of students with disabilities in statewide assessment, provided guidance for IEP teams, and announced the availability of alternate assessments.

a) Has the State developed, disseminated information on, and promoted use of appropriate accommodations to increase the number of students with disabilities who are tested against academic achievement standards for the grade in which they are enrolled?

Yes. The Accommodations Manual and Tables (Doc. 5) provide a comprehensive list of state-approved accommodations that students may use when testing, as well as guidance to test administrators, IEP teams, and parents regarding the selection and administration of accommodations. ODE provides districts with additional information on accommodations in Part V – Accommodations and Modifications of the 2010-2011 Test Administration Manual and through the regional District Test Coordinator trainings which ODE conducts annually.

b) Has the State ensured that general and special education teachers and other appropriate staff know how to administer assessments, including making use of accommodations, for students with disabilities and students covered under Section 504?

Prior to administering any OAKS assessment, OAR 581-022-0610: Administration of State Tests requires that all test administrators receive annual test administration and security training (Doc. 6.1). Before the start of each new school year, ODE provides regional test administration and security training to district test coordinators and Educational Service District (ESD) staff from around the state. ODE uses a "train the trainer" model, where ODE trains the district test coordinators who then train the school test coordinators, who in turn train test administrators. Training is organized into different "modules," which respectively cover the various assessment options, accommodations, conditions for valid test administration, and information about which students are eligible (or required) to take each assessment (Doc. 2.5, Section 5). Test administrators administering the Extended assessments are required to receive additional annual training specific to the Extended assessment. All individuals who administer the Extended Assessments in the state of Oregon must be certified educators who are appropriately trained as either a Qualified Assessor (QA). ODE communicates to districts about these training requirements through the Test Administration Manual. In addition to providing annual training, district test coordinators disseminate regular updates and alerts from ODE regarding the general assessment system (including accommodations) to test administrators throughout the test window.

2. If the State has approved/adopted modified or alternate academic achievement standards for certain students with disabilities, what guidelines does the State have in place for placing those students in the appropriate assessment?

Part 4 of the Extended Assessment Administration Manual provides a thorough discussion of the guidelines for placing students with disabilities in the appropriate assessment, along with guidance to IEP teams to aid them in understanding and selecting assessment options for students with disabilities (Doc. 7.5).

a) Has the State developed clear guidelines for IEP Teams to apply in determining which students with disabilities are eligible to be assessed based on modified or alternate academic achievement standards?

Yes. ODE provides guidance for IEP teams to apply when deciding when a student should be assessed using alternate assessment methods and standards. ODE provides this guidance in "Part A: Guidelines for Completion" and "Part B: Oregon Standard Individualized Education Program" of the IEP Guidelines & Form (Doc. 7.7 and Doc. 7.8), in Part 4 of the Extended Assessment General Administration and Scoring Manual (Doc. 7.5), and through the "Guidelines for Statewide

Assessment Decision Making for IEP Teams" (Doc. 7.6).

b) Has the State informed IEP Teams that students eligible to be assessed based on alternate or modified academic achievement standards may be from any of the disability categories listed in the IDEA?

Yes. Part 4 of the Extended Assessment Administration Manual provides a thorough discussion of which students are eligible to be assessed based on alternate academic achievement standards, along with guidance to aid IEP teams in understanding and selecting assessment options for students with disabilities (regardless of disability categories listed in the IDEA) (Doc. 7.5).

c) Has the State provided IEP Teams with a clear explanation of the differences between assessments based on grade-level academic achievement standards and those based on modified or alternate academic achievement standards, including any effects of State and local policies on the student's education resulting from taking an alternate based on alternate or modified standards?

Yes. "Part A: Guidelines for Completion" of the IEP Guidelines & Form (Doc. 7.7 and Doc. 7.8) indicates that "The IEP Team should review the most current Statewide Assessment Administration Manual(s)….so all IEP Team members, including the parents, understand the options for and implications of, standard and non-standard administration, including modified administration." Further, "Part B: Oregon Standard Individualized Education Program" of the IEP Guidelines & Form (Doc. 7.7 and Doc. 7.8) includes the list of all assessment options, including alternate assessments. Finally, the Oregon Parent Training and Information Center (OrPTI) was established (in part) to "promote the participation of students with disabilities in statewide assessments and to provide information on the options, implications, and opportunities for such participation for parents and educators."

d) Has the State ensured that parents are informed that their child's achievement will be based on modified or alternate academic achievement standards and of any possible consequences resulting from LEA or State policy (e.g., ineligibility for a regular high school diploma)?

Yes. The Oregon Parent Training and Information Center (OrPTI) was established (in part) to "promote the participation of students with disabilities in statewide assessments and to provide information on the options, implications, and opportunities for such participation for parents and educators."

3. If the State has adopted modified academic achievement standards, do the guidelines include all required components?

a) Criteria for IEP Teams to use to determine which students with disabilities are eligible to be assessed based on modified academic achievement standards that include, at a minimum, each of the following?

- **The student's disability has precluded the student from achieving grade-level proficiency as demonstrated by objective evidence of the student's academic performance; and**
- **The student's progress to date in response to appropriate instruction, including special education and related services designed to address the student's individual needs, is such that, even if significant growth occurs, the IEP Team is reasonably certain that the student will not achieve grade-level proficiency within the year covered by the student's IEP; and**
- **The student's IEP goals for subjects assessed by the statewide system are based on the academic content standards for the grade in which the student is enrolled.**

N/A: ODE has not adopted modified academic achievement standards.

b) Has the State informed IEP Teams that a student may be assessed based on modified academic achievement standards in one or more subjects?

N/A: ODE has not adopted modified academic achievement standards.

c) Has the State established and monitored implementation of clear and appropriate guidelines for developing IEPs that include goals based on content standards for the grade in which a student is enrolled?

N/A: ODE has not adopted modified academic achievement standards.

d) Has the State ensured that students who are assessed based on modified academic achievement standards have access to the curriculum, including instruction, for the grade in which the students are enrolled?

N/A: ODE has not adopted modified academic achievement standards.

e) Has the State ensured that students who take an alternate assessment based on modified academic achievement standards are not precluded from attempting State diploma requirements?

N/A: ODE has not adopted modified academic achievement standards.

f) Has the State ensured annual IEP Team review of assessment decisions?

N/A: ODE has not adopted modified academic achievement standards.

4. Has the State documented that students with the most significant cognitive disabilities are, to the extent possible, included in the general curriculum?

N/A: ODE has not adopted modified academic achievement standards.

6.3
What guidelines does the State have in place for including all students with limited English proficiency in the tested grades in the assessment system?

LEP students are given equal opportunity to participate in the OAKS, with districts choosing the appropriate testing option for each LEP student individually for each assessment on the basis of what is in the best interest of the student (Doc 2.5, Section 3.2.3).

a) Has the State made available assessments, to the extent practicable, in the language and form most likely to yield accurate and reliable information on what these students know and can do?

LEP students may use accommodations from the Accommodations Manual identified by the school district as appropriate for the individual student and assessment (Doc. 5). Examples of accommodations designed to support LEP students in taking OAKS include translated English/Spanish versions of OAKS Math, Science, and Social Sciences (Doc. 2.5, Section 3.2.2).

b) Does the State require the participation of every limited English proficient student in the assessment system, unless a student has attended schools in the US for less than 12 months, in which case the student may be exempt from one administration of the State's reading/language arts assessment?

All new LEP students (defined as students who enrolled in a U.S. school for the first time on or after the first school day in May of the preceding school year) must take Oregon's English Language Proficiency Assessment (ELPA). New LEP students are not required to take the OAKS Reading/Literature or Writing Performance assessments; instead, they may use the ELPA to meet the AYP Reading Participation requirement. New LEP students are required to take the OAKS Mathematics assessment to meet the AYP Mathematics Participation requirement, but their scores are not factored into AYP Performance calculations. In addition, new LEP students are required to take the OAKS Science assessment for state accountability purposes, although this assessment is not factored into AYP accountability calculations. LEP students first enrolled in a U.S. school before May 2 of the preceding school year must take all OAKS assessments required at their grade level (Doc. 2.5, Section 3.2.3).

c) Has the State adopted policies requiring limited English proficient students to be assessed in reading/language arts in English if they have been enrolled in US schools for three consecutive years or more?

In 2009-10, ODE developed a native-language Grade 3 Spanish Reading assessment available through OAKS Online. Pending approval by the U.S. Department of Education, ODE will allow Grade 3 LEP students to use this Grade 3 Spanish Reading assessment to meet both the AYP Reading participation and performance requirements. LEP students in Grades 4 – high school are required to take OAKS Reading in English (Doc. 2.5, Section 3.2.3).

6.4
What policies and practices does the State have in place to ensure the identification and inclusion of migrant and other mobile students in the tested grades in the assessment system?

The Oregon Migrant Education Program (MEP) Plan is the service delivery plan in which ODE outlines how it will meet the needs of migrant students. This plan is monitored by the Office of Migrant Education, a division of the U.S. Department of Education. The general purpose of the MEP is to ensure that migrant children fully benefit from the same free public education provided to other children. To achieve this purpose, the MEP helps State Educational Agencies and local operating agencies address the unique educational needs of migrant children to better enable migrant children to succeed academically. More specifically, the purposes of the MEP are to:

- Support high-quality and comprehensive educational programs for migrant children in order to reduce the educational disruption and other problems that result from the migrant life style;
- Ensure that migrant children who move among the States are not penalized in any manner by disparities among the States in curriculum, graduation requirements, and State academic content and student academic achievement standards;
- Ensure that migrant children are provided with appropriate educational services (including supportive services) that address their needs in a coordinated and efficient manner;
- Ensure that migrant children receive full and appropriate opportunities to meet the same challenging State academic content and student academic achievement standards that all children are expected to meet;
- Design programs to help migrant children overcome educational disruption, cultural and language barriers, social isolation, various health-related problems, and other factors that inhibit their ability to do well in school, and to prepare them to make a successful transition to postsecondary education or employment; and
- Ensure that migrant children benefit from State and local systemic reforms.

To ensure the identification and inclusion of all homeless mobile students in the assessment system, all districts are required to designate a Homeless Liaison to identify homeless students and help them to access and succeed in schools, including student participation in all state tests. Additionally, all districts that are under competitive sub-grants for this program are required to provide SSIDs of public school-enrolled homeless students, Pre-K through Grade 12, to ODE each year to calculate

homeless student achievement levels for all tested grade levels (3 – 8 and high school) in both reading and math. The results of these counts and the achievement statistics appear in the Oregon State Report Card each year and are required to complete the consolidated state performance report (CSPR) federal data collection.

7.1
Does the State's reporting system facilitate appropriate, credible, and defensible interpretation and use of its assessment data?

Following administration of the Oregon Statewide Assessments, Oregon provides individual interpretive, descriptive, and diagnostic reports. The reports include reliable and valid information describing student progress toward the state content standards and are written specifically for parents, teachers, and administrators. The purpose of these reports is to facilitate the accurate and useful interpretation and application of scores in a way that can be clearly and easily understood by all audiences. The state provides a variety of reports describing student and aggregate performance in student/parent, classroom, school, district, and state summary reports. Oregon's assessment reports include the following characteristics:

- Student performance in terms of the state's content and achievement standards is clearly presented using both graphics and text.
- Improved performance-level descriptors (PLDs) are clear and easily understandable descriptions of what student scores mean. PLDs describe the skills and knowledge students are expected to know at each level of performance and are provided on all reports, including student/parent reports.
- Reports consider the precision of the scores in interpretation. All test scores include some variability, and results are presented in such a way as to avoid over-interpreting results without considering this variability inherent in measurement. Reports include both graphic and textual representations of the standard error of measurement to guide appropriate interpretation and avoid making inferences about performance that are not valid (Doc. 2.6, Section 3.1, p. 4).

In addition, Oregon Technical Manual Volume 6 provides stakeholders with an interpretive guide to Oregon's assessment reports (Doc 2.6, Section 5, p. 12).

7.2
Does the State report participation and assessment results for all students and for each of the required subgroups in its reports at the school, LEA, and State levels? In these assessment reports, how has the State ensured that assessment results are not reported for any group or subgroup when these results would reveal personally identifiable information about an individual student?

Assessment results are reported for all students and for each of the required subgroups at the school, district, and state levels. Under NCLB, the subgroups identified for determining AYP are students with disabilities; limited English proficient; economically disadvantaged; and the major racial/ethnic groups in the state (white, black, Hispanic, Asian/Pacific Islander, American Indian/Alaskan Native, and multi-racial/multi-ethnic). Assessment results are disaggregated for talented and gifted students (TAG) and migrant students. Volume 6, Section 4 of Oregon's Technical Manual provides additional information on subgroup membership definitions and reporting (Doc. 2.6, Section 4, p. 9).

Oregon provides four comprehensive methods for districts to access assessment results:

- Public Assessment Results – A public searchable web application that provides school, district, and state level results for the number and percent of students participating and for each level of achievement. These data are provided for all students as well as each subgroup. These data are suppressed if they do not meet confidentiality constraints (e.g. if there are less than 6 students that comprise a cell or if more than 95% or less than 5% of students meet the standard in a cell).

- Secure Assessment Group Reports – A secure portal that allows districts to create tables and graphs of participation, performance and performance overtime by various combinations of grades and subgroups. Districts are able to export these data into Excel or PDF format. These data are not suppressed based on confidentiality rules.
- Individual Student Reports, Classroom Rosters and Combined Individual Student Reports – These reports are also secure and accessible to the districts. Districts are able to generate PDF files containing these files based on a record search that can encompass a wide variety of criteria
    - The individual student report contains a single page per student and includes the students' total score, strand scores, and the scale score range for each score based on the standard error of measure. This report also includes the achievement level descriptor for the total score.
    - The Combination Individual Student Report provides a single page overview of the scores for a student in all subject areas. It includes the total score in each subject area and the associated achievement level descriptor.
    - The class roster reports show students grouped according to teacher name and grade level. Reports default to grade level groups if teacher names are not uploaded by districts into ODE's database.
- Finally, Oregon provides districts with access to the raw data through a secure comma delimited file download system. The system uses the same searchable web-based interface used for the student reports and provides all the demographics, program fields, scores for the total test and strands as well as standard errors of measurement for each score respectively.

These assessment reports are described in greater detail in Volume 6 of Oregon's Technical Manual (Doc. 2.6, Section 3, p. 2). In addition to following the confidentiality constraints described above, Volume 6, Section 3.7 of Oregon's Technical Manual describes those Oregon Administrative Rules which have been adopted to protect student confidentiality in relation to assessment data (Doc. 2.6, Section 3.7, p. 8).

7.3

How has the State provided for the production of individual interpretive, descriptive, and diagnostic reports following each administration of its assessments?

a) Do these individual student reports provide valid and reliable information regarding achievement on the assessments in relation to the State's academic content and achievement standards?

Oregon provides reports that contain scale scores, score ranges based on the standard error of measurement, achievement levels, and achievement level descriptors. Oregon provides strand data at the individual and classroom level to support identifications of student strengths and instructional needs (Doc. 13).

b) Do these individual student reports provide information for parents, teachers, and principals to help them understand and address a student's specific academic needs? Is this information displayed in a format and language that is understandable to parents, teachers, and principals and are the reports accompanied by interpretive guidance for these audiences?

The combined individual student report is an efficient means by which students, parents and teachers can see a snapshot of student performance in an easy to understand format. These reports (along with the other individual student reports) can be printed on-demand to provide the information stakeholders need in a convenient an economical manner. Volume 6 of the technical manual (Doc. 2.6) provides an interpretive guide for stakeholders to better understand and use the reports.

c) How has the State ensured that these individual student reports will be delivered to parents, teachers, and principals as soon as possible after the assessment is administered?

Students receive their test scores immediately upon completing an online test. Data from the online tests are loaded into ODE's system within 2 days and are thereafter immediately accessible through the various reporting systems. In addition, Oregon Administrative Rule # 581-022-1670: Individual Student Assessment, Recordkeeping, and Reporting requires school districts to report at least annually to parents or guardians of all students in grades K-12 regarding their student's scores on all state assessments (Doc. 6.4).

7.4
How has the State ensured that student-level assessment data are maintained securely to protect student confidentiality?

Data available to the public through Oregon's public assessment reports are suppressed when confidentiality is at risk based on conservative business rules. If a cell size is comprised of less than 6 students' scores or if more than 95% of students in a group meet/exceed the state standard or less than 5% of students in a group meet/exceed the state standard then the data are not displayed.

ODE considers Secure Student Identifiers (SSIDs) to be confidential and requires districts to maintain the confidentiality of secure student information. Currently, the state provides assessment records only to the resident district at the time the test was administered. In addition, Part III – Student Confidentiality of the 2010-2011 Test Administration Manual instructs districts that individual student information and test results must not be made public or exposed in such a manner that student names can be identified with student results, except to authorized individuals with an educational need to know (Doc. 2.5, Section 6.1). These requirements are also included in Oregon's annual trainings to district test coordinators and as periodic reminders in weekly newsletters that go out to district test coordinators throughout the year.

7.5
How has the State provided for the production of itemized score analyses so that parents, teachers, and principals can interpret and address the specific academic needs of students?

All assessment reports at the student, classroom, school, district, and state levels show data at both the total test and sub-domain level. See Document 2.6 for report samples.

As mentioned above in Oregon's response to critical element 7.3 (b), the major purpose of individual student reporting is to give teachers, parents and school administrators a profile of relative strengths and weaknesses. As is evident from the large SEMs, the individual student data are not sufficient by themselves to pinpoint individual academic needs. The Oregon assessment system is predicated on the use of classroom assessment to supplement state reports.