

# **Oregon General Assessment and Growth Model**

**NCAASE Coordinating Session  
State Growth Models and Databases for Students with  
Disabilities**

**March 7, 2012**

## **Content Covered in Reading and Mathematics**

- Test Specifications and Blueprints describe expectations for student learning  
(<http://www.ode.state.or.us/search/page/?id=496>)
- Following pages provide an overview of the score reporting categories and example test specifications

### Weighting of Score Reporting Categories

The chart below shows the score reporting categories for each of the grade levels and the percentage of questions on a given test administration that would be assessing that category. For example, at grade 3, 28% of the items on a test assess Vocabulary, which equals about 14 items on a 50-item test. NA indicates that skills for a particular SRC are not assessed at that grade level.

|                 | Percent of Questions |                               |                                          |                                  |                                                        |                                                     |
|-----------------|----------------------|-------------------------------|------------------------------------------|----------------------------------|--------------------------------------------------------|-----------------------------------------------------|
|                 | <i>Vocabulary</i>    | <i>Read to Perform a Task</i> | <i>Demonstrate General Understanding</i> | <i>Develop an Interpretation</i> | <i>Examine Content and Structure: Informative Text</i> | <i>Examine Content and Structure: Literary Text</i> |
|                 | <b>SRC 1</b>         | <b>SRC 2</b>                  | <b>SRC 3</b>                             | <b>SRC 4</b>                     | <b>SRC 5</b>                                           | <b>SRC 6</b>                                        |
| <b>Grade 3</b>  | 28%                  | 16%                           | 28%                                      | 28%                              | NA                                                     | NA                                                  |
| <b>Grade 4</b>  | 25%                  | 13%                           | 25%                                      | 25%                              | 12%                                                    | NA                                                  |
| <b>Grade 5</b>  | 21%                  | 13%                           | 21%                                      | 21%                              | 12%                                                    | 12%                                                 |
| <b>Grade 6</b>  | 20%                  | 12%                           | 20%                                      | 20%                              | 14%                                                    | 14%                                                 |
| <b>Grade 7</b>  | 20%                  | 12%                           | 20%                                      | 20%                              | 14%                                                    | 14%                                                 |
| <b>Grade 8</b>  | 20%                  | 12%                           | 18%                                      | 20%                              | 15%                                                    | 15%                                                 |
| <b>Grade 10</b> | 20%                  | 12%                           | 16%                                      | 20%                              | 16%                                                    | 16%                                                 |

# DEVELOP AN INTERPRETATION

Score Reporting Category 4

**Common Curriculum Goals:** Develop an interpretation of grade-level informational text across the subject areas.  
Develop an interpretation of grade-level literary text.

|                           | <b>Grade 5 Standards</b>                                                                                                                                   | <b>Explanation</b>                                                                                                                                                                                                      | <b>Sample Stems/Questions</b>                                                                                                                                                                                                                                                                  |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Informational Text</b> | Predict future outcomes supported by the text.                                                                                                             | Students use information contained in the text to predict events that are most likely to occur in the future.                                                                                                           | What do you think is most likely to happen if more people read this article and learn some things about bats?<br><br>If people listen to scientists who worked on this project, they will most likely                                                                                          |
|                           | Draw inferences, conclusions, or generalizations about main ideas in text, and support them with textual evidence.                                         | Students use specific evidence from the text to reach logical conclusions and make supported inferences. Students may be asked to make a generalization about the main idea of a text if it is not specifically stated. | The article tells us that scarecrows have been used for over three thousand years. This is probably because<br><br>Although it is never really stated, the main idea of this article is<br><br>Clues in the text let us know that the heaviest material used to lift balloons into the air was |
|                           | Determine unstated ideas and concepts, noting and analyzing evidence that supports those unstated ideas, such as images, patterns, or symbols in the text. | Students infer the author's unstated meaning based on evidence explicitly provided in the text.                                                                                                                         | Based on the information in this article, the author would most likely agree with the idea that<br><br>The image of the sunken ship helpless under the water is used to support the idea that                                                                                                  |

## Weighting of Mathematics Score Reporting Categories

The chart below shows the score reporting categories for each of the grades and the percentage of questions on a test that assess each score reporting category. For example, at grade 5, 35% of the items on a test assess Number and Operations and Data Analysis, which equals about 14 items on a 40-item test. The second chart, on the next page, is an expanded view of the criteria for test weighting.

| Grade     | Score Reporting Category 1              | Weight | Score Reporting Category 2                        | Weight | Score Reporting Category 3         | Weight |
|-----------|-----------------------------------------|--------|---------------------------------------------------|--------|------------------------------------|--------|
| <b>3</b>  | Number and Operations                   | 35%    | Number and Operations, Algebra, and Data Analysis | 35%    | Geometry and Measurement           | 30%    |
| <b>4</b>  | Number and Operations                   | 35%    | Number and Operations and Algebra                 | 35%    | Measurement                        | 30%    |
| <b>5</b>  | Number and Operations and Data Analysis | 35%    | Number and Operations and Algebra                 | 35%    | Geometry, Algebra, and Measurement | 30%    |
| <b>6</b>  | Number and Operations                   | 35%    | Number and Operations and Probability             | 35%    | Algebra                            | 30%    |
| <b>7</b>  | Number and Operations and Algebra       | 35%    | Number and Operations, Algebra and Geometry       | 35%    | Measurement and Geometry           | 30%    |
| <b>8</b>  | Algebra                                 | 40%    | Data Analysis and Algebra                         | 30%    | Geometry and Measurement           | 30%    |
| <b>HS</b> | Algebra                                 | 50%    | Geometry                                          | 30%    | Statistics                         | 20%    |

**Core Standard: 5.3 Geometry, Measurement, and Algebra:**

**Score Reporting Category 3**

Describe and relate two-dimensional shapes to three-dimensional shapes and analyze their properties, including volume and surface area.

It is essential that these standards be addressed in contexts that promote problem solving, reasoning, communication, making connections, and designing and analyzing representations.

**Content Standard:**

5.3.5 Determine volume by finding the total number of same-sized units of volume that fill a three-dimensional shape without gaps or overlaps.

**Assessable Academic Vocabulary:**

same-sized units  
three-dimensional shape  
volume

**Symbols and Notation:**

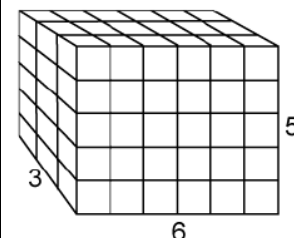
**Boundaries of Assessable Content:**

- Items assessing this standard give students a unit of volume and ask them how many of those units would fill a three-dimensional shape without gaps or overlaps.
- Volume may need to be estimated.
- Same-sized units may not be cubes, they may be any three-dimensional shape.
- Volume will refer to cubic units, and should not refer to units of capacity. (cups, liters)

**Content Connections from Previous Grades:**  
4.3.2, 5.3.4

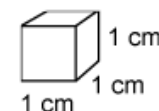
**Sample Items:**

The rectangular prism shown is built using 1 cubic cm blocks.  
How many blocks are used?



A. 15 B. 18 C. 63 D. 90

Kim is designing a box for storing 1 cm cubes. The box has a base that is 3 cm wide and 5 cm long. How high would the box need to be to hold exactly 60 cubes?



A. 15 B. 5 C. 4 D. 3

## Scores and Scales

- Vertical scales in reading and mathematics, ranging from 150 to 300
- Within-grade standard deviation approximately 10 scale score points
- Originally linked to NWEA achievement scales
- Scores reported at total test and strand levels
- Content-referenced interpretation through achievement level descriptors (see example from grade 8 mathematics)
- Achievement standards established through bookmark standard-setting method, informed by external links to NAEP and PISA

| Achievement Standards by Subject and Grade |         |             |
|--------------------------------------------|---------|-------------|
| Grade                                      | Reading | Mathematics |
| 3                                          | 211     | 212         |
| 4                                          | 216     | 219         |
| 5                                          | 221     | 225         |
| 6                                          | 226     | 227         |
| 7                                          | 229     | 232         |
| 8                                          | 232     | 234         |
| 11                                         | 236     | 236         |

# Oregon Mathematics Achievement Level Descriptors – Grade 8

The achievement level descriptors are cumulative.

|                                                                                                                                                                                           | Does Not Yet Meet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Nearly Meets                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Meets                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Exceeds                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General Policy Definitions</b><br>(Apply to all grades and all subjects)                                                                                                               | Students do not demonstrate mastery of grade-level knowledge and skills required for proficiency.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Students demonstrate partial mastery of grade-level knowledge and skills required for proficiency.                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Students demonstrate mastery of grade-level knowledge and skills required for proficiency.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Students demonstrate mastery of grade-level knowledge and skills exceeding the requirement for proficiency.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Mathematics Policy Definitions</b><br>(Apply to all grades)                                                                                                                            | Students demonstrate limited mastery of mathematical knowledge and skills through the direct application of a concept or procedure in simplified and familiar situations with occasional success.                                                                                                                                                                                                                                                                                                                                                                                                                                              | Students demonstrate partial mastery of mathematical knowledge and skills through the direct application of concepts and procedures in familiar situations with regular success. They are able to explain some of their steps.                                                                                                                                                                                                                                                                                                                               | Students demonstrate mastery of mathematical knowledge and skills through selecting from an assortment of strategies and integrating concepts and procedures in a variety of situations with consistent success. They are able to explain steps and procedures.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Students demonstrate mastery of mathematical knowledge and skills through the use of multiple reasoning strategies and apply them in new and complex situations with consistent success. They are able to analyze their strategies and solutions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Mathematics Achievement Level Descriptors</b><br><br><b>8.1</b><br><b>Algebra:</b> Analyze and represent linear functions, and solve linear equations and systems of linear equations. | <ul style="list-style-type: none"> <li>• Inconsistently translate among simple contextual, verbal, tabular, graphical, <b>or</b> algebraic representations of linear functions.</li> <li>• Inconsistently find the slope of a line given routine representations.</li> <li>• Inconsistently identify <b>or</b> determine the x <b>or</b> y intercept of linear relationships.</li> <li>• Inconsistently use linear equations to solve routine problems in one variable.</li> <li>• Inconsistently use informal strategies (e.g., graphs or tables) to solve systems of linear equations in two variables with integer coefficients.</li> </ul> | <ul style="list-style-type: none"> <li>• Translate among routine contextual, verbal, tabular, graphical, <b>or</b> algebraic representations of linear functions.</li> <li>• Find the slope of a line given routine representations.</li> <li>• Identify <b>or</b> determine the x <b>and</b> y intercept of linear relationships.</li> <li>• Use linear equations to solve routine problems and use them to make predictions.</li> <li>• Use informal strategies (e.g., graphs or tables) to solve systems of linear equations in two variables.</li> </ul> | <ul style="list-style-type: none"> <li>• Translate among contextual, verbal, tabular, graphical, <b>and</b> algebraic representations of linear functions.</li> <li>• Determine slope of a line and identify the slope as a constant rate of change from multiple representations.</li> <li>• Identify <b>and</b> interpret the intercepts of linear relationships in different representations, <b>and</b> recognize a proportional relationship (<math>y = kx</math>).</li> <li>• Select and use linear functions and equations to represent and analyze problems to make predictions and inferences.</li> <li>• Use informal strategies (e.g., graphs or tables) to solve problems involving systems of linear equations in two variables; relate the system to a pair of lines that are intersecting, parallel, or the same line.</li> </ul> | <ul style="list-style-type: none"> <li>• Translate among non-routine contextual, verbal, tabular, graphical <b>and</b> algebraic representations of linear functions.</li> <li>• Interpret the slope of a line as a constant rate of change from multiple representations and justify reasoning.</li> <li>• Identify <b>and</b> interpret continuity and discreteness of linear relationships in different representations, <b>and</b> recognize a proportional relationship (<math>y = kx</math>).</li> <li>• Select and use linear functions and equations to represent and analyze complex problems to make predictions and inferences.</li> <li>• Use informal strategies (e.g., graphs or tables) to solve problems involving systems of linear equations in two variables; relate the system to a pair of lines that are intersecting, parallel, or the same line; and explain strategies.</li> </ul> |

## **Policies on Allowed Accommodations**

# ACCOMMODATIONS TABLES

## OREGON STATE ASSESSMENT SYSTEM

### 2011 – 2012

### ACCOMMODATIONS OVERVIEW

### KNOWLEDGE AND SKILLS

| TYPE OF<br>ACCOMMODATION                        | STANDARD ADMINISTRATION OF KNOWLEDGE AND SKILLS ASSESSMENTS WITH<br>ACCOMMODATIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Changes in the test directions                  | <ul style="list-style-type: none"> <li>• Read or reread directions to student (A101)</li> <li>• Sign directions (A102)</li> <li>• Translate directions orally (A103)</li> <li>• Provide written version of oral directions (A104)</li> <li>• Simplify language in directions (A105)</li> <li>• Provide written translations of oral directions (Spanish for mathematics, science, social sciences are available in the Appendices of the 2010 – 2011 Test Administration Manual (TAM). (A107)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Changes in how the test questions are presented | <ul style="list-style-type: none"> <li>• Enlarged display/print size (A201)</li> <li>• Read mathematics, science, and social sciences (not reading/literature) items and response choices aloud to the student by the test administrator or by use of technology following the ODE adapted NAEP Math read-aloud guidelines posted. (A203)</li> <li>• The test administrator may write symbols and/or numerals exactly as they appear in the assessment in order to enlarge them and make them visually accessible. The entire formula or statement should be duplicated so that the context remains intact. (A204)</li> <li>• Make a verbatim audio recording of available Paper/Pencil side-by-side tests in English-Spanish; read verbatim directly from the test booklet or the student's screen (A205)</li> <li>• Student reads test aloud or sub-vocalizes text to listener or self (A208)</li> <li>• Visual magnification devices or software (A212)</li> <li>• Use of projection devices (A213)</li> <li>• Administration of side-by-side Spanish/English version of the mathematics and science tests (A214)</li> <li>• Accessing OAKS online through Braille interface (JAWS audio, Refreshable Braille display, and/or embossed Braille) (A218)</li> </ul> |
| Changes in how the student responds             | <ul style="list-style-type: none"> <li>• Students using any assistive technology device that serves as their primary communication mode (e.g., adaptive keyboard) (A302)</li> <li>• Point to or dictate multiple-choice responses to a Test Administrator (A303)</li> <li>• Student retells story to test administrator or educational assistant in his or her own words before responding to the multiple-choice items (A304)</li> <li>• Student is allowed to vocalize his or her thought process out loud to himself or to a neutral test administrator (A307)</li> <li>• Student is allowed to use a recording device to record/play back questions, passages, and responses (A308)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Changes in test setting                         | <ul style="list-style-type: none"> <li>• Test an individual student in a separate location (A401)</li> <li>• Test a small group of students in a separate, but familiar, location (A402)</li> <li>• Support physical position of student, e.g. preferential seating, special lighting, increase/decrease opportunity for movement, provide position assistance, adaptive equipment/ furniture (A403)</li> <li>• Use sensory supports or interventions to allow students to attend to task (A404)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

| TYPE OF<br>ACCOMMODATION   | STANDARD ADMINISTRATION OF KNOWLEDGE AND SKILLS ASSESSMENTS WITH<br>ACCOMMODATIONS                                         |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Changes in test scheduling | <ul style="list-style-type: none"> <li>Administer at a time of day most beneficial to the student <b>(A501)</b></li> </ul> |

## ACCOMODATIONS FOR ENGLISH LANGUAGE LEARNERS (ELLs) KNOWLEDGE AND SKILLS

| TYPE OF<br>ACCOMMODATION                        | STANDARD ADMINISTRATION OF KNOWLEDGE AND SKILLS<br>ASSESSMENTS WITH ACCOMMODATIONS                                                                                                                                                                                                                                                                                           |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Changes in the test directions                  | <ul style="list-style-type: none"> <li>Translate directions orally <b>(A103)</b></li> <li>Provide written version of oral directions <b>(A104)</b></li> <li>Provide written translations of oral directions (Spanish for mathematics, science, social sciences are available in the Appendices of the 2010 – 2011 Test Administration Manual (TAM). <b>(A107)</b></li> </ul> |
| Changes in how the test questions are presented | <ul style="list-style-type: none"> <li>Make a verbatim audio recording of available Paper/Pencil side-by-side tests in English-Spanish; read verbatim directly from the test booklet or the student's screen <b>(A205)</b></li> <li>Administration of side-by-side Spanish/English version of the mathematics and science tests <b>(A214)</b></li> </ul>                     |
| Changes in how the student responds             | <ul style="list-style-type: none"> <li>Point to or dictate multiple-choice responses to a Test Administrator (TA) (in English or language of origin) <b>(A303)</b></li> </ul>                                                                                                                                                                                                |

# ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

## KNOWLEDGE AND SKILLS

| TYPE OF<br>ACCOMMODATION                        | STANDARD ADMINISTRATION OF KNOWLEDGE AND SKILLS<br>ASSESSMENTS WITH ACCOMMODATIONS                                                                                                                                                            |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Changes in the test directions                  | <ul style="list-style-type: none"> <li>• Sign directions <b>(A103)</b></li> <li>• Simplify language in directions <b>(A105)</b></li> </ul>                                                                                                    |
| Changes in how the test questions are presented | <ul style="list-style-type: none"> <li>• Large print version of the test <b>(A201)</b></li> <li>• Accessing OAKS online through Braille interface (JAWS audio, Refreshable Braille display, and/or embossed Braille) <b>(A218)</b></li> </ul> |
| Changes in how the student responds             | <ul style="list-style-type: none"> <li>• Point to or dictate multiple-choice responses to a Test Administrator (TA) <b>(A303)</b></li> </ul>                                                                                                  |
| Changes in test setting                         | <ul style="list-style-type: none"> <li>• Support physical position of student, e.g., provide position assistance, adaptive equipment/ furniture <b>(A403)</b></li> </ul>                                                                      |

## Retesting Policies

- Up to three opportunities per subject over a seven-month testing window
- Student's highest score used for accountability reports
- Retesting frequency by grade/subject (2009-10)

| Subject     | Grade | Number of Testing Opportunities Used |     |     |
|-------------|-------|--------------------------------------|-----|-----|
|             |       | 1                                    | 2   | 3   |
| Reading     | 3     | 31%                                  | 43% | 26% |
| Reading     | 4     | 33%                                  | 44% | 23% |
| Reading     | 5     | 25%                                  | 43% | 32% |
| Reading     | 6     | 28%                                  | 45% | 27% |
| Reading     | 7     | 33%                                  | 47% | 20% |
| Reading     | 8     | 26%                                  | 45% | 29% |
| Reading     | HS*   | 62%                                  | 27% | 11% |
| Mathematics | 3     | 24%                                  | 44% | 32% |
| Mathematics | 4     | 25%                                  | 43% | 32% |
| Mathematics | 5     | 25%                                  | 43% | 32% |
| Mathematics | 6     | 23%                                  | 46% | 31% |
| Mathematics | 7     | 28%                                  | 47% | 25% |
| Mathematics | 8     | 28%                                  | 44% | 29% |
| Mathematics | HS*   | 55%                                  | 30% | 15% |

HS\* includes grades 9 through 12

- Best practices guide developed to guide retesting decisions

## Major Changes Over Past 10 Years

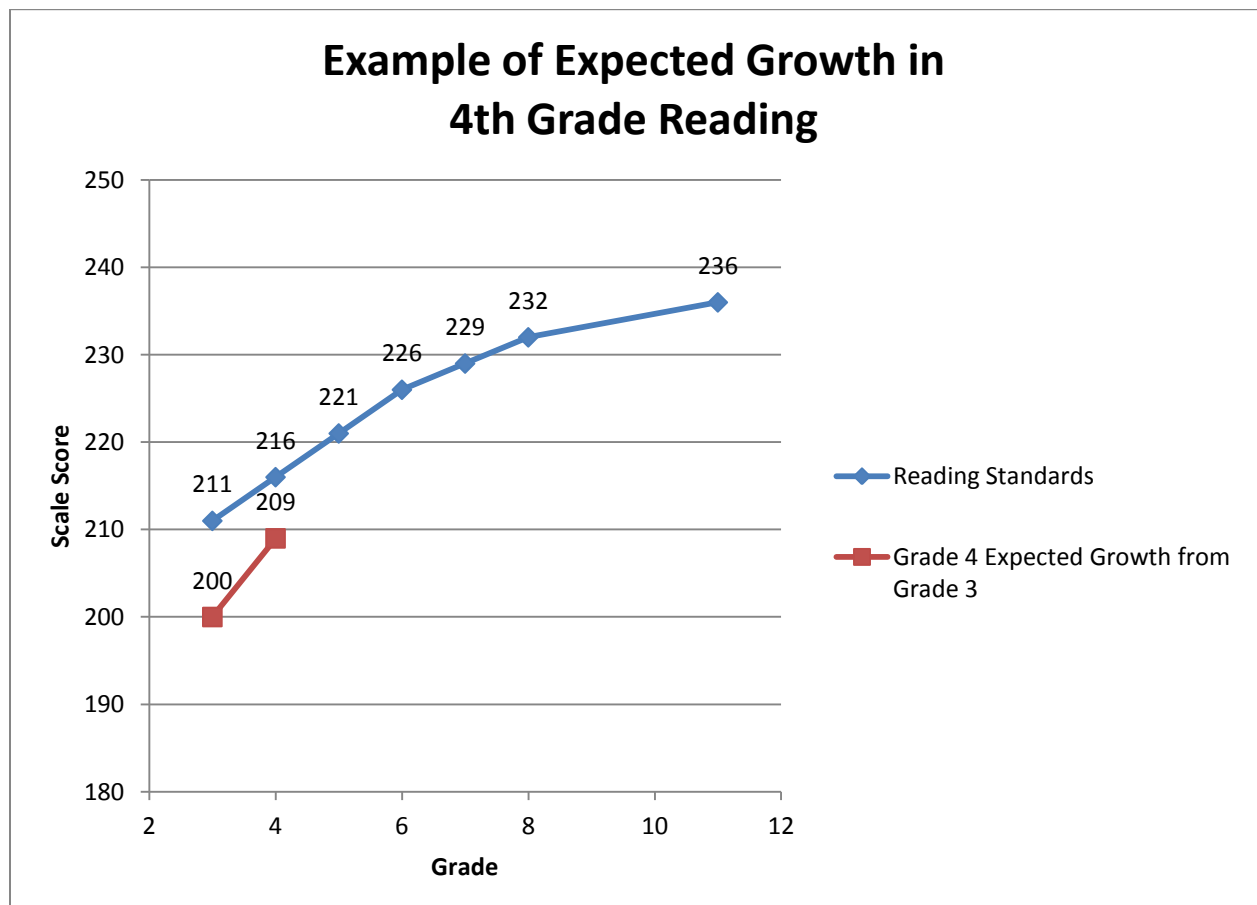
- Transition from paper to computer-adaptive assessment complete in 2004-05
- All students in grades 3-8 and 11 included in 2004-05
- Content standards
  - Reading content standards adopted in 2002
  - Mathematics content standards adopted in 2007
- Achievement standards
  - Reading achievement standards revised in 2007 and 2011
  - Mathematics achievement standards revised in 2007 and 2010
  - Latest revisions were designed to improve vertical articulation of cut scores (i.e., meeting standards in earlier grades more predictive of meeting standards at high school level)

# Description of State Achievement Growth Model

## Growth question being answered

- Is this student on target to reach proficiency in three years? (Growth to standards model)
- Each student has an individual growth target based on
  - gap between prior year's performance and the "proficient" achievement standard three years later (e.g., 3<sup>rd</sup> grade to 6<sup>th</sup> grade)
  - required percentage decrease in gap

- Sample target calculation for 4<sup>th</sup> grader in reading who had a score of 200 in 3<sup>rd</sup> grade
  - Gap between performance in 3<sup>rd</sup> grade (200) and 6<sup>th</sup> grade standard (226) is 26 points
  - Expected gap closure rate for 4<sup>th</sup> grade is based on the relative growth of cut scores over the same interval ( $216 - 211$  divided by  $226 - 211 = 0.33$ )
  - Growth target for this 4<sup>th</sup> grader is gap multiplied by expected gap closure ( $26 * 0.33 = 9$  points)

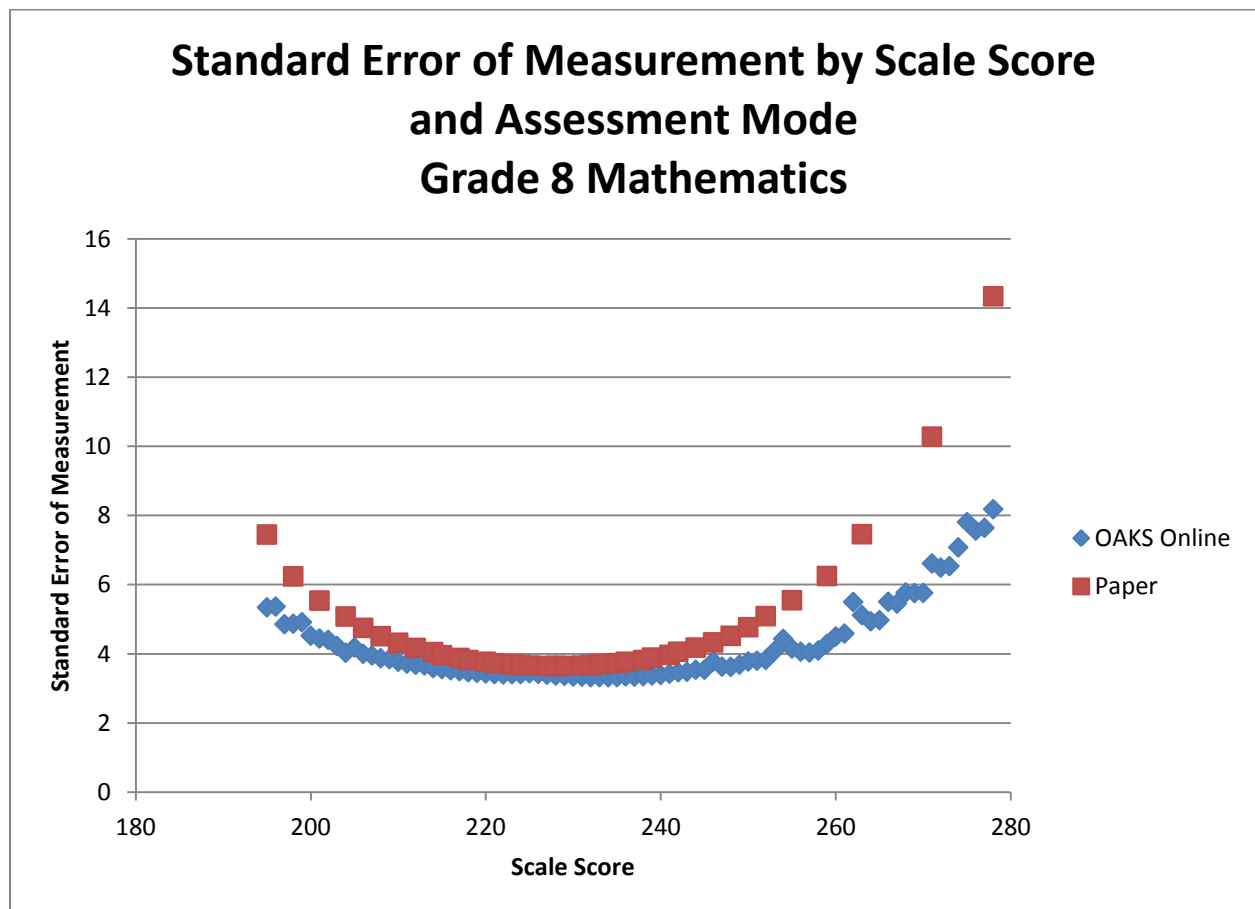


## **Key Features of the Student-Centered Model**

- Targets and data are reproducible by districts
- Targets are known prior to testing
- Students, parents and teachers can immediately know whether growth or status targets have been met
- Explicitly addresses whether a student gained enough to be on track for success in high school and beyond (policy message)

## Scores on a Common Scale

- Computer adaptive testing within grade-level content constraints (required by NCLB)
- Adaptive testing reduces conditional standard error of measurement across the range of student ability, relative to fixed form (see example)



## **How Student- and School-Level Growth Outcomes are Reported**

- School report card formula gives same credit to students who meet growth target and students who meet “proficient” standard.
- Sample school detail report on next page
- Individual student growth reports are available for download

**Achievement Index Rating: Outstanding**

$$\text{School Achievement Index} = (\text{Reading Index} + \text{Math Index}) / 2$$

$$= (118.1 + 101.2) / 2 = 109.7$$

| Rating      | In Need of Improvement | Satisfactory | Outstanding    |
|-------------|------------------------|--------------|----------------|
| Index Score | Less than 60.0         | 60.0 to 89.9 | 90.0 or higher |

**Reading and Math Achievement Index Data**

| Reading                                       | 2009-2010                           |       |                     |    |    |         | 2010-2011                          |       |                     |    |    |         |
|-----------------------------------------------|-------------------------------------|-------|---------------------|----|----|---------|------------------------------------|-------|---------------------|----|----|---------|
|                                               | Meets or Exceeds                    |       | Does Not Meet       |    |    | # Tests | Meets or Exceeds                   |       | Does Not Meet       |    |    | # Tests |
|                                               | Exceeds                             | Meets | Meets Growth Target |    |    |         | Exceeds                            | Meets | Meets Growth Target |    |    |         |
|                                               |                                     |       | Yes                 | No | NA |         |                                    |       | Yes                 | No | NA |         |
| All Students                                  | 95                                  | 63    | 0                   | 1  | 0  | 159     | 107                                | 41    | 0                   | 2  | 1  | 151     |
| Economically Disadvantaged                    | 13                                  | 20    | 0                   | 1  | 0  | 34      | 13                                 | 13    | 0                   | 0  | 0  | 26      |
| Limited English Proficient                    | --                                  | --    | --                  | -- | -- | --      | *                                  | *     | *                   | *  | *  | *       |
| Students with Disabilities                    | 8                                   | 12    | 0                   | 1  | 0  | 21      | 11                                 | 6     | 0                   | 0  | 1  | 18      |
| Amer Ind/Alskn Ntv                            | *                                   | *     | *                   | *  | *  | *       | --                                 | --    | --                  | -- | -- | --      |
| Black (not of Hispanic origin)                | *                                   | *     | *                   | *  | *  | *       | *                                  | *     | *                   | *  | *  | *       |
| Hispanic                                      | 3                                   | 7     | 0                   | 0  | 0  | 10      | 6                                  | 7     | 0                   | 0  | 0  | 13      |
| Asian/Pacific Islander                        | 4                                   | 3     | 0                   | 0  | 0  | 7       | 8                                  | 3     | 0                   | 0  | 0  | 11      |
| Asian                                         |                                     |       |                     |    |    |         | 8                                  | 2     | 0                   | 0  | 0  | 10      |
| Pacific Islander                              |                                     |       |                     |    |    |         | *                                  | *     | *                   | *  | *  | *       |
| White (not of Hispanic origin)                | 82                                  | 45    | 0                   | 0  | 0  | 127     | 88                                 | 28    | 0                   | 2  | 1  | 119     |
| Multi-Racial/Multi-Ethnic                     | 4                                   | 6     | 0                   | 1  | 0  | 11      | 4                                  | 3     | 0                   | 0  | 0  | 7       |
| Column Totals (excluding White, Asian, Multi) | 121                                 | 104   | 0                   | 3  | 0  | 228     | 139                                | 67    | 0                   | 2  | 2  | 210     |
| Weight                                        | 133                                 | 100   | 100                 | 0  | 0  |         | 133                                | 100   | 100                 | 0  | 0  |         |
| Weighted Counts                               | 16093                               | 10400 | 0                   |    |    |         | 18487                              | 6700  | 0                   |    |    |         |
| Yearly Index                                  | ( 16093 + 10400 + 0 ) / 228 = 116.2 |       |                     |    |    |         | ( 18487 + 6700 + 0 ) / 210 = 119.9 |       |                     |    |    |         |
| Reading Index                                 | ( 116.2 + 119.9 ) / 2 = 118.1       |       |                     |    |    |         |                                    |       |                     |    |    |         |

| Math                                          | 2009-2010                           |       |                     |    |    |         | 2010-2011                           |       |                     |    |    |         |
|-----------------------------------------------|-------------------------------------|-------|---------------------|----|----|---------|-------------------------------------|-------|---------------------|----|----|---------|
|                                               | Meets or Exceeds                    |       | Does Not Meet       |    |    | # Tests | Meets or Exceeds                    |       | Does Not Meet       |    |    | # Tests |
|                                               | Exceeds                             | Meets | Meets Growth Target |    |    |         | Exceeds                             | Meets | Meets Growth Target |    |    |         |
|                                               |                                     |       | Yes                 | No | NA |         |                                     |       | Yes                 | No | NA |         |
| All Students                                  | 68                                  | 83    | 0                   | 4  | 4  | 159     | 71                                  | 55    | 4                   | 11 | 10 | 151     |
| Economically Disadvantaged                    | 7                                   | 23    | 0                   | 1  | 3  | 34      | 9                                   | 9     | 1                   | 6  | 1  | 26      |
| Limited English Proficient                    | --                                  | --    | --                  | -- | -- | --      | *                                   | *     | *                   | *  | *  | *       |
| Students with Disabilities                    | 9                                   | 9     | 0                   | 2  | 1  | 21      | 9                                   | 3     | 1                   | 3  | 2  | 18      |
| Amer Ind/Alskn Ntv                            | *                                   | *     | *                   | *  | *  | *       | --                                  | --    | --                  | -- | -- | --      |
| Black (not of Hispanic origin)                | *                                   | *     | *                   | *  | *  | *       | *                                   | *     | *                   | *  | *  | *       |
| Hispanic                                      | 2                                   | 6     | 0                   | 1  | 1  | 10      | 3                                   | 6     | 2                   | 2  | 0  | 13      |
| Asian/Pacific Islander                        | 2                                   | 5     | 0                   | 0  | 0  | 7       | 6                                   | 3     | 0                   | 0  | 2  | 11      |
| Asian                                         |                                     |       |                     |    |    |         | 6                                   | 3     | 0                   | 0  | 1  | 10      |
| Pacific Islander                              |                                     |       |                     |    |    |         | *                                   | *     | *                   | *  | *  | *       |
| White (not of Hispanic origin)                | 60                                  | 63    | 0                   | 2  | 2  | 127     | 59                                  | 42    | 2                   | 9  | 7  | 119     |
| Multi-Racial/Multi-Ethnic                     | 2                                   | 8     | 0                   | 1  | 0  | 11      | 3                                   | 4     | 0                   | 0  | 0  | 7       |
| Column Totals (excluding White, Asian, Multi) | 88                                  | 122   | 0                   | 8  | 10 | 228     | 93                                  | 73    | 8                   | 22 | 14 | 210     |
| Weight                                        | 133                                 | 100   | 100                 | 0  | 0  |         | 133                                 | 100   | 100                 | 0  | 0  |         |
| Weighted Counts                               | 11704                               | 12200 | 0                   |    |    |         | 12369                               | 7300  | 800                 |    |    |         |
| Yearly Index                                  | ( 11704 + 12200 + 0 ) / 228 = 104.8 |       |                     |    |    |         | ( 12369 + 7300 + 800 ) / 210 = 97.5 |       |                     |    |    |         |
| Math Index                                    | ( 104.8 + 97.5 ) / 2 = 101.2        |       |                     |    |    |         |                                     |       |                     |    |    |         |

## **Handling of Missing Scores**

- Students tested in previous and current year included in growth calculation

## **Handling of Non-Linear Growth**

- Percentage gap reduction target for current year takes into account non-linear expectations (achievement standards) across grades

## **How Growth is Assessed across Test Editions**

- Underlying scale is common across test years
- Individual growth targets are recalculated based on performance in the most recent year