An Overview of Growth Measures

Virginia Board of Education's

Committee on School and Division Accountability

July 26, 2017

VIRGINIA DEPARTMENT OF EDUCATION

Why Measure Growth?

- **Considering both achievement and growth may provide a more complete picture of student learning.**
- **Achievement – Did students achieve proficiency?**
- **Growth – Did students demonstrate progress based on where they started the school year?**

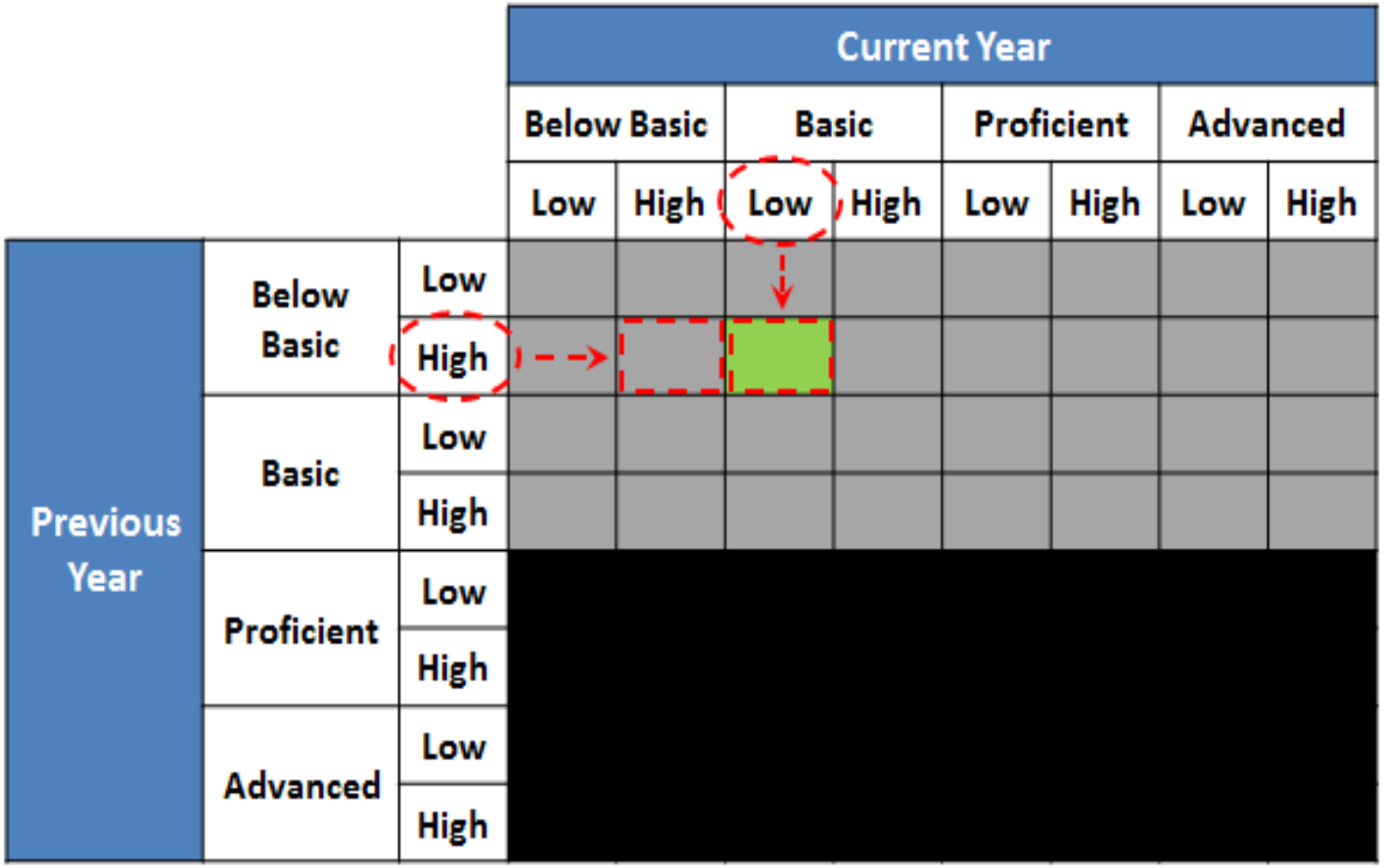
Growth Measures Discussed

- **Progress Tables**
- **Vertical Scale**
- **Commercially Available Assessments**

Progress Tables

- **In the Progress Tables student growth is determined by comparing the student's Standards of Learning (SOL) test score from the prior year to his/her SOL test score in the current year.**
- **The SOL tests for reading and mathematics in grades 3-8 are currently reported in four performance levels: Below Basic, Basic, Proficient, and Advanced.**
- **To facilitate a more granular measurement of growth, each of these levels is divided in half to create two sublevels: Low Below Basic, High Below Basic, Low Basic, High Basic, Low Proficient, High Proficient, Low Advanced, and High Advanced.**

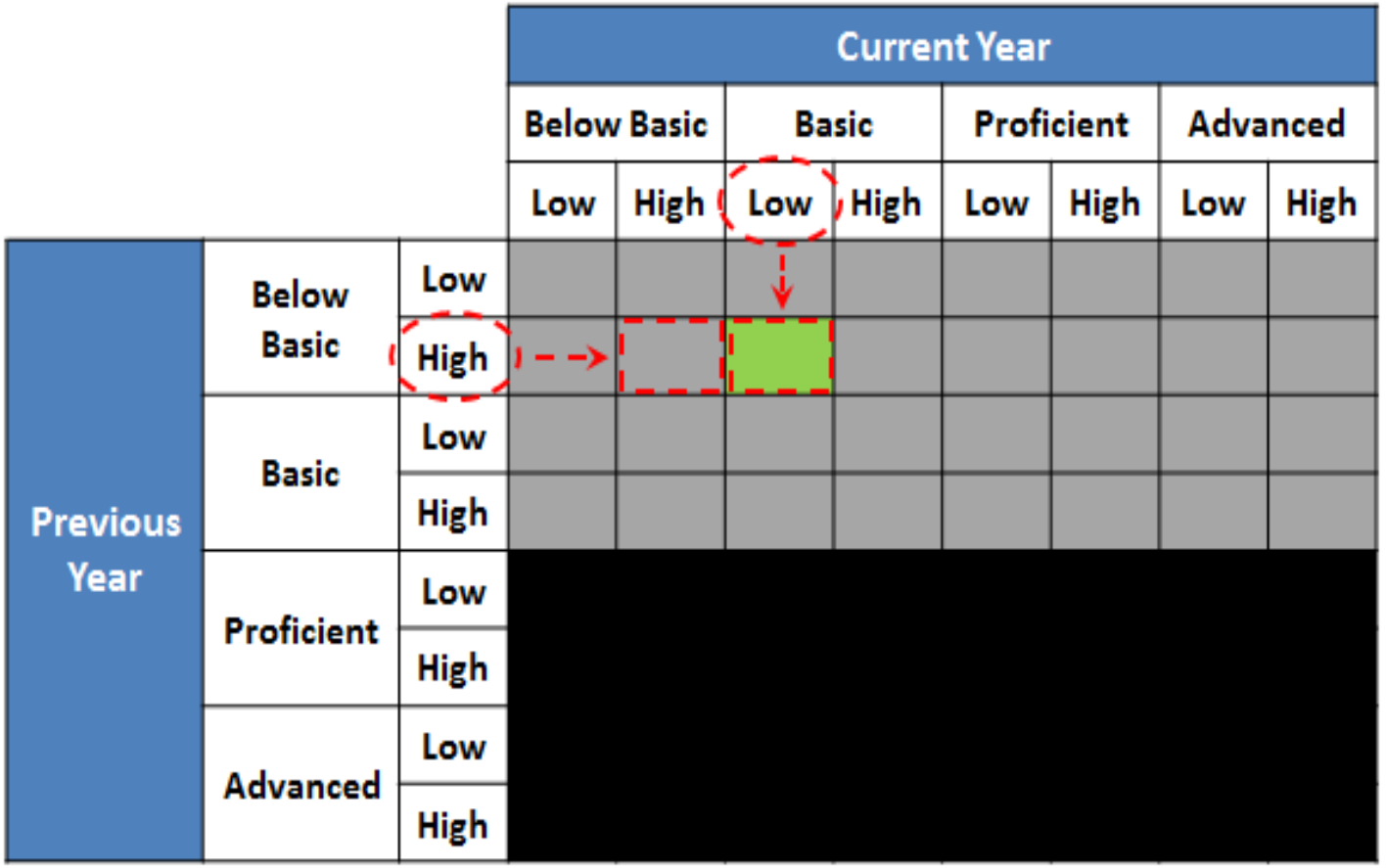
Progress Table Examples



Determination of Student Growth Using Progress Tables

- **Current use of Progress Tables is to recognize efforts of schools in supporting students who continue to fail the SOL tests but are demonstrating progress.**
- **Student progress is measured by whether a student who failed the reading and/or mathematics SOL test the previous year has moved at least one sublevel based on the current year's data.**
- **For example, a student whose score on the grade 3 reading test in 2015-2106 was "high below basic" has moved one sublevel if his score on the grade 4 reading test in 2016-2017 was "low basic."**

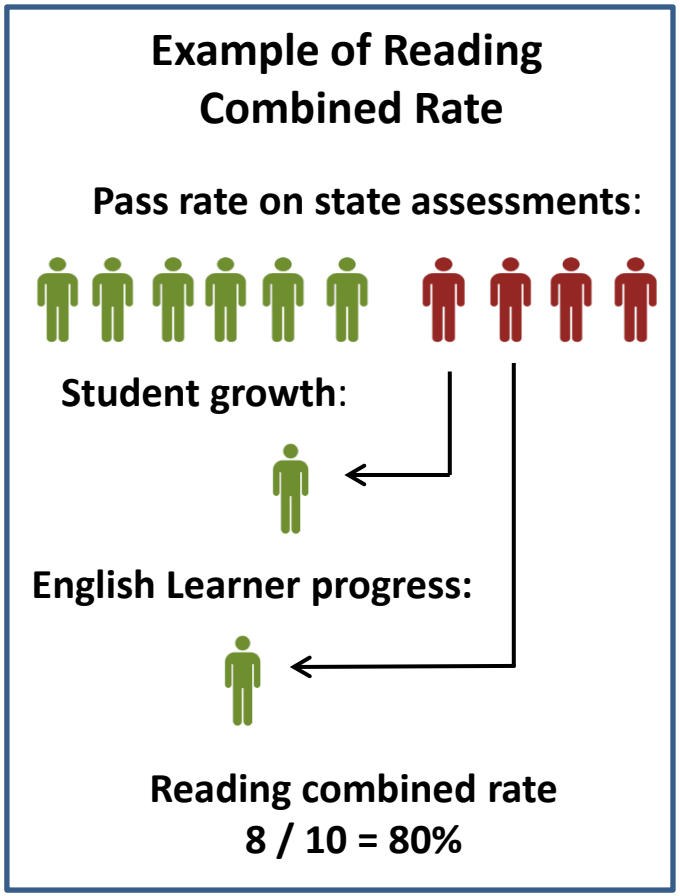
Progress Table Example



Use of Progress Tables in Combined Rate for Accountability Calculations for Reading and Mathematics

- Integrates **achievement**, **growth**, and **progress** for EL students towards gaining proficiency in reading.
- A student will be counted in the numerator of the reading or mathematics combined rate if:
  - The student passes the assessment*; or
  - The student does not pass the assessment but demonstrates growth using the progress tables; or
  - For the reading assessment only, the student does not pass the assessment or demonstrate growth, but is an EL and demonstrates progress as measured by the ACCESS for ELLs 2.0 assessment.

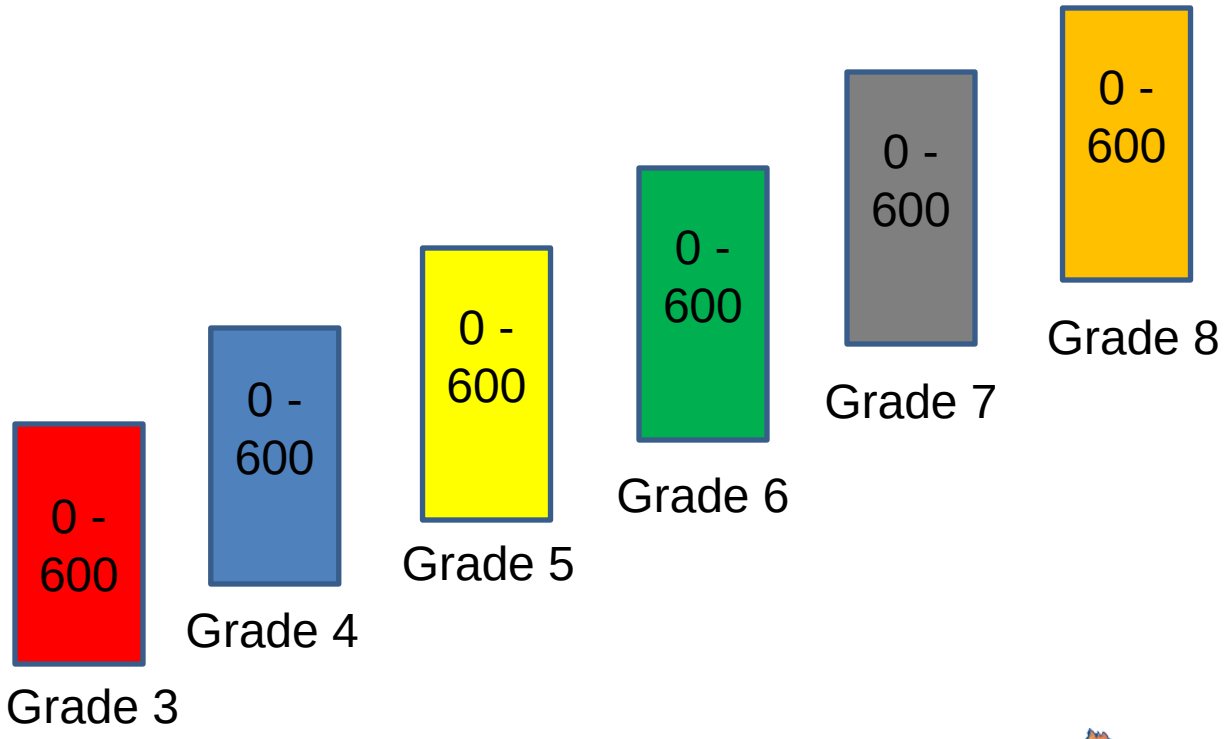
*Includes recovery



Vertical Scale

Current SOL Scale

Scores on each SOL test are currently reported on a 0 - 600 scale that is specific to that test.



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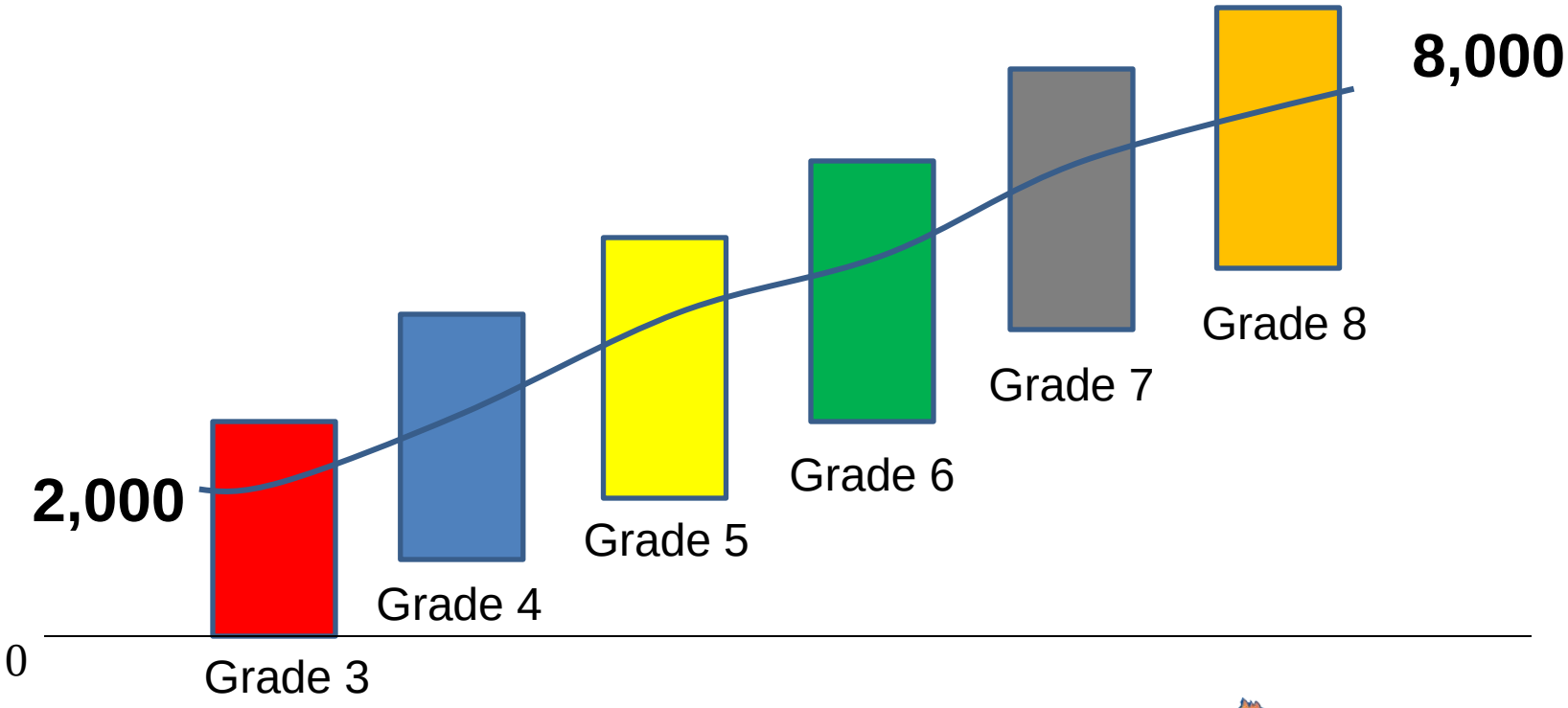
Vertical Scale

- **A vertical scale would allow for the reporting of scores across SOL tests.**
  - For example, a vertical scale for reading could allow for the reporting of scores for the grade 3 reading test through the grade 8 reading test.

Sample Vertical Scale



Vertical Scaling Study

- **Creating a vertical scale requires that we “link” the tests together.**
- **In spring 2016 a study was conducted to “link” the content of the reading tests for grades 3-8 and the mathematics tests for grade 3 – Algebra I together so that a vertical scale could be created.**
- **Results are promising but must be re-evaluated based on the change in the mathematics SOL.**

Potential Growth Measures with Vertical Scale and CAT

- **Across-year growth: growth from test taken the previous year to test taken in the current year.**
- **Within-year growth: could allow for students to test in the fall and again in the spring to measure growth within the year.**

Use of Computer Adaptive Testing to Support the Measurement of Growth

- **Customized selection of items for students supports more precise measurement of student achievement and growth.**
- **Combined with the vertical scale, CAT supports off-grade level testing.**

ESSA and Off-Grade Level Testing

- **Under ESSA we must provide information regarding a student's proficiency in reading and mathematics in grades 3-8.**
- **However, unlike NCLB, ESSA also allows for "off-grade level" testing if a computer adaptive model is used.**

Excerpt from ESSA

(J) ADAPTIVE ASSESSMENTS.— (i) IN GENERAL.—Subject to clause (ii), a State retains the right to develop and administer computer adaptive assessments as the assessments described in this paragraph, provided the computer adaptive assessments meet the requirements of this paragraph, except that—

(I) subparagraph (B)(i) shall not be interpreted to require that all students taking the computer adaptive assessment be administered the same assessment items; and

(II) such assessment—

(aa) shall measure, at a minimum, each student's academic proficiency based on the challenging State academic standards for the student's grade level and growth toward such standards; and

(bb) may measure the student's level of academic proficiency and growth using items above or below the student's grade level, including for use as part of a State's accountability system under subsection (c).

Timeline for Implementation of Vertical Scales

- **Mathematics**
  - 2018-2019
  - Additional linking studies will be needed in spring 2018 because of content changes in mathematics SOL.
- **Reading**
  - Once curriculum framework is approved this fall, content changes in SOL will be evaluated so that a timeline can be determined.

Use of Commercially Available Growth Assessments

Challenges in the Use of Commercially Available Growth Assessments

- **Determination of degree of alignment to the Standards of Learning.**
- **Determination of how much growth on each assessment is sufficient for inclusion in accountability ratings.**
- **Development of a secure system to collect scores.**
- **Challenges in including scores from different tests in accountability calculations.**
- **Approval by USED of each test if used for ESSA.**
- **Additional testing required for students.**
- **Accommodations for students with disabilities may not be available.**

Questions?