

**PLANNING SESSION AGENDA**  
**April 27, 2011**

***D. OVERVIEW OF THE VIRGINIA GROWTH MEASURE***

Presenter: Dr. Deborah Jonas, Executive Director of Research and Strategic Planning

Dr. Jonas will distribute handouts at the planning session.



## Student Growth Percentiles

In fall 2011, the Virginia Department of Education (VDOE) will report growth percentiles in addition to scaled scores for students who participate in Standards of Learning (SOL) testing for reading and mathematics in grades 4-8 and Algebra I through grade 9. These student-level reports will be available to administrators through VDOE’s secure SSWS web portal and to teachers as authorized locally.

### What is a student growth percentile?

A growth percentile expresses how much progress a student has made in either reading or mathematics relative to the progress of students whose achievement was similar on previous assessments.

Student growth percentiles are calculated by identifying all students in the state whose previous SOL scaled scores in a subject are statistically similar and, then, comparing the achievement of these students on the next grade-level test. The achievement of each student relative to that of the other students in the group is expressed as a percentile.

Student growth percentiles range from 1 to 99, and represent the percent of students who had similar prior academic achievement (based on SOL tests) and earned lower scores on the most recent test in the content area. Higher numbers represent higher growth and lower numbers represent lower growth. For example, a student who earns a student growth percentile of 65 scored better than 65 percent of students who had similar prior achievement, while a classmate with a student growth percentile of 13 scored better than only 13 percent.

Let’s examine the meaning of the hypothetical student growth percentiles of four elementary students who all achieved scaled scores of 313 on the 2010 grade-3 reading test.

**Example Grade-3 Reading:  
SOL Scores and Student Growth Percentiles**

Name	2010 Grade-3 Reading	2011 Grade-4 Reading	Growth Percentile
Student A	313	307	15
Student B	313	358	48
Student C	313	387	66
Student D	313	445	91

In the chart above, Student D was the highest achieving of the group, and the only one to exceed the minimum scaled score for proficiency of 400. Student D also showed the most growth because he achieved at a higher level than 91 percent of students statewide with similar histories.

Student A was the lowest achieving of the four students on the grade-4 test. The growth percentile of 15 indicates that Student A achieved at a higher level than 15 percent of students statewide with similar score histories.

Student B, with a student growth percentile of 48, demonstrated close-to-typical growth in reading compared with students with similar score histories. About half of the students who performed similarly on past assessments experienced more growth and about half experienced less.

(more)

Now, let's compare the growth of four students who each earned a scaled score of 412 on the 2010 grade-3 mathematics test.

**Example Grade-3 Mathematics:  
SOL Scores and Student Growth Percentiles**

Name	2010 Grade-3 Mathematics	2011 Grade-4 Mathematics	Growth Percentile
Student A	412	372	13
Student B	412	409	33
Student C	412	443	58
Student D	412	510	92

Student D earned a 510 on the fourth-grade test in 2011 and showed more growth in mathematics than 92 percent of similar students statewide. Student A showed the least growth relative to similar students.

**Why is Virginia reporting student growth percentiles to teachers and administrators?**

A student growth percentile complements a student's SOL scaled score and gives his or her teacher, parents and principal a more complete picture of achievement and progress. A high growth percentile is an indicator of effective instruction, regardless of a student's scaled score.

Analysis of student growth percentile data can help educators identify best practices, evaluate teacher effectiveness and plan data-driven professional development that meets the needs of educators and students. Student growth percentiles also can provide encouragement during parent-teacher conferences by quantifying progress towards higher levels of student achievement.

In addition, to receive certain federal funds under the federal American Recovery and Reinvestment Act of 2009, states are required to provide timely data on student growth to teachers in a manner that helps quantify the impact of individual teachers on student achievement.

Under the federal requirements, states are required to provide growth data to each assessed student's current and previous teacher. So, if a student is a fifth grader in the fall, his fifth-grade teacher and his fourth-grade teacher during 2010-2011 will receive student growth data.

**Will teachers receive student growth percentile reports for all students?**

VDOE will report student growth percentiles for students who participate in 2010-2011 SOL testing for reading and mathematics in grades 4-8 and Algebra I through grade 9.

Reporting a student growth percentile requires SOL scaled scores for at least two years. VDOE will not report student growth percentiles for:

- Students who did not attend a Virginia public school in 2010 and/or did not take a SOL reading and/or mathematics test in 2010; and
- Students who took an alternate or alternative assessment in reading and/or mathematics in 2010 or 2011.

Additionally, currently available data will not permit VDOE to report student growth percentiles for students who achieved perfect or near-perfect SOL scaled scores during 2009-2010 and 2010-2011. The introduction of enhanced SOL assessments in mathematics during 2011-2012 and reading in 2012-2013 (based on more rigorous content standards in both subjects) will allow VDOE to report growth percentiles for more of the commonwealth's highest-performing students.

# # #

# Student Growth Percentiles

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# Federal Requirements

- The State Fiscal Stabilization Act (SFSF) of the American Recovery and Reinvestment Act of 2009 (ARRA) requires Virginia to:
  - Develop a student growth measure.
  - Provide student growth data to reading and math teachers in tested grades.
  - Provide data to both previous and current teachers.
- VDOE has established new data collections to meet this and other ARRA requirements.

# Student Growth Percentiles

- SOL scores measure whether students met a particular standard.
- Student growth percentiles describe how much progress students make relative to students with similar achievement histories on SOL tests.

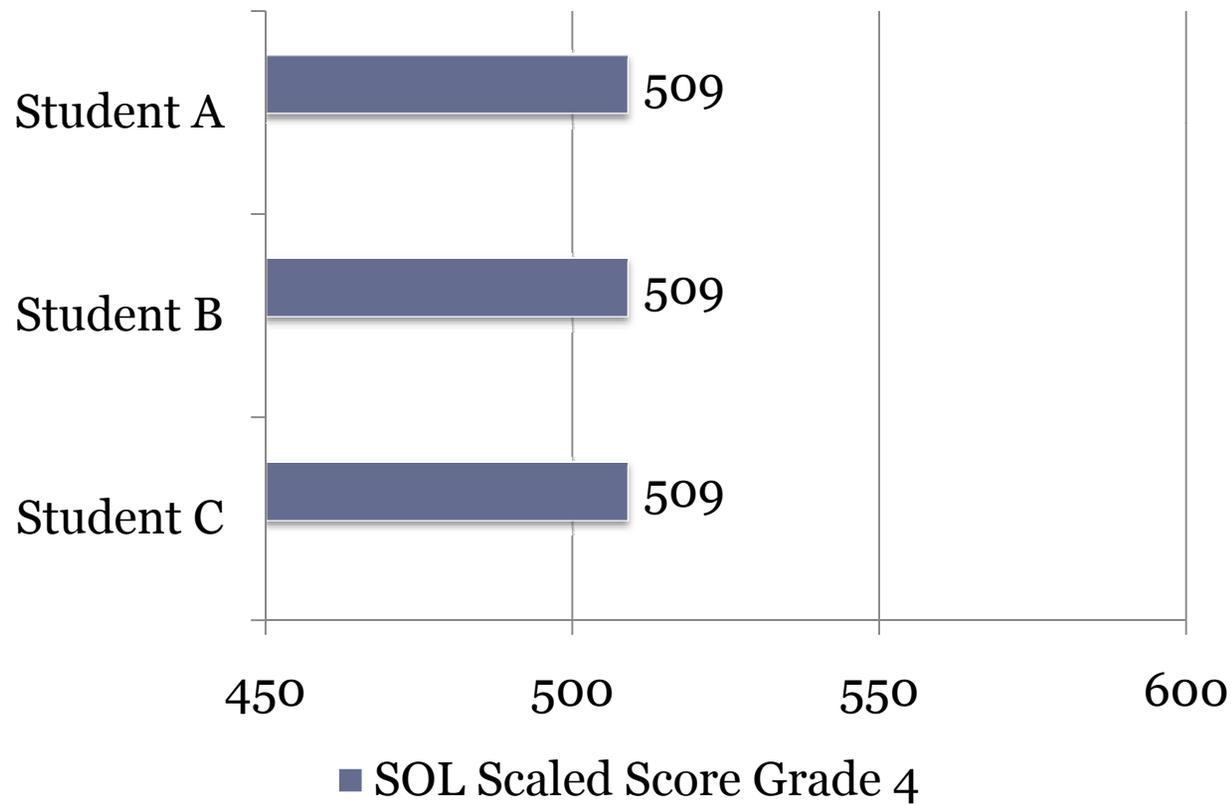
# Student Growth Percentiles

- At least two years of data are necessary to report a student growth percentile for a student.
- VDOE will calculate student growth percentiles for students participating in the following SOL tests:
  - Mathematics, grades 4-8 & Algebra I through grade 9
  - Reading, grades 4-8

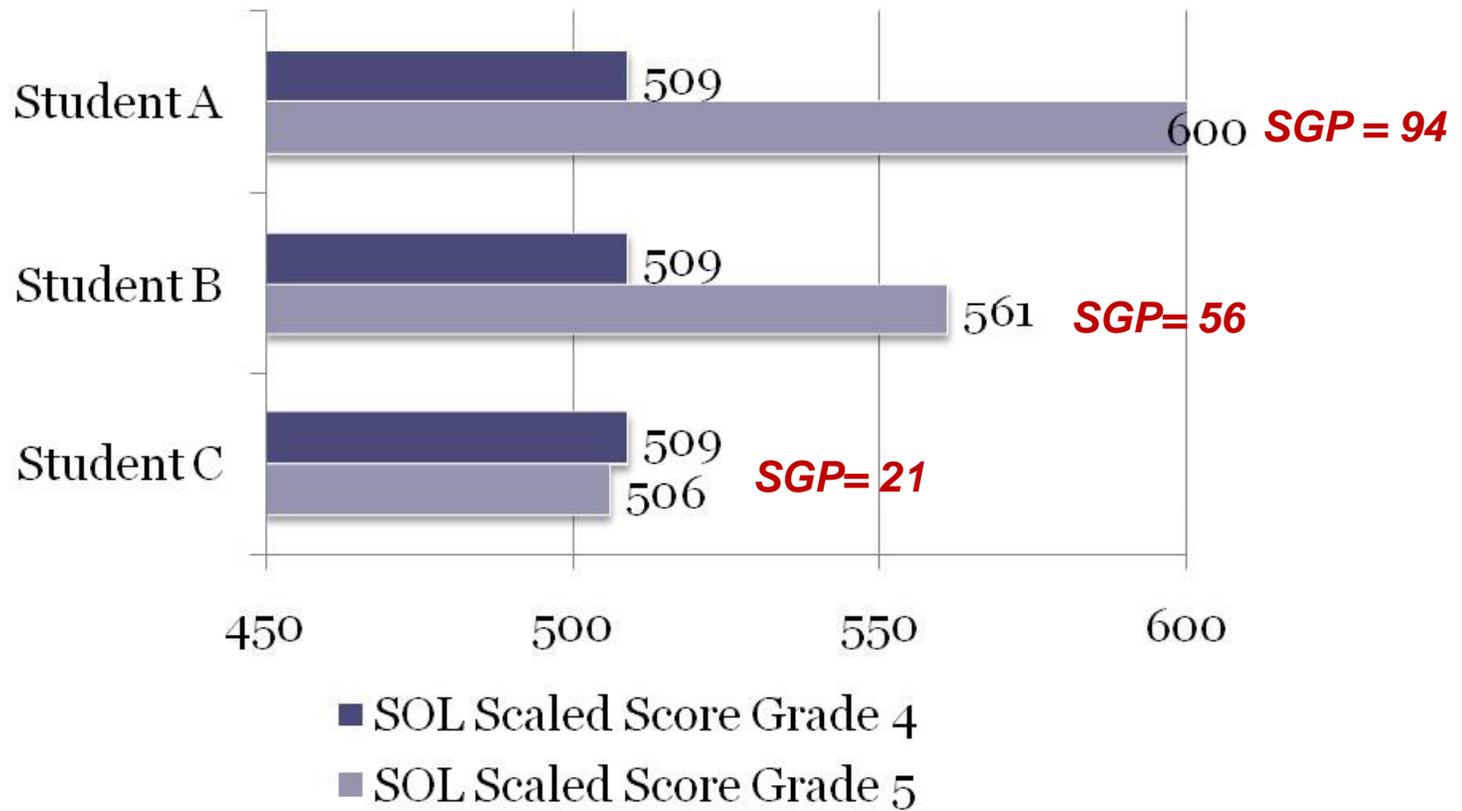
# Student Growth Percentiles (SGPs)

- SGPs range from 1 to 99, and represent the percent of students who had similar prior academic achievement (based on SOL tests) and who earned lower scores on the SOL test.
- Example: a student who earns an SGP of 65 scored better than 65 percent of students who had the same prior achievement as measured by SOL tests.
- Example: a student who earns an SGP of 15 scored better than 15 percent of students who had the same prior achievement as measured by SOL tests.

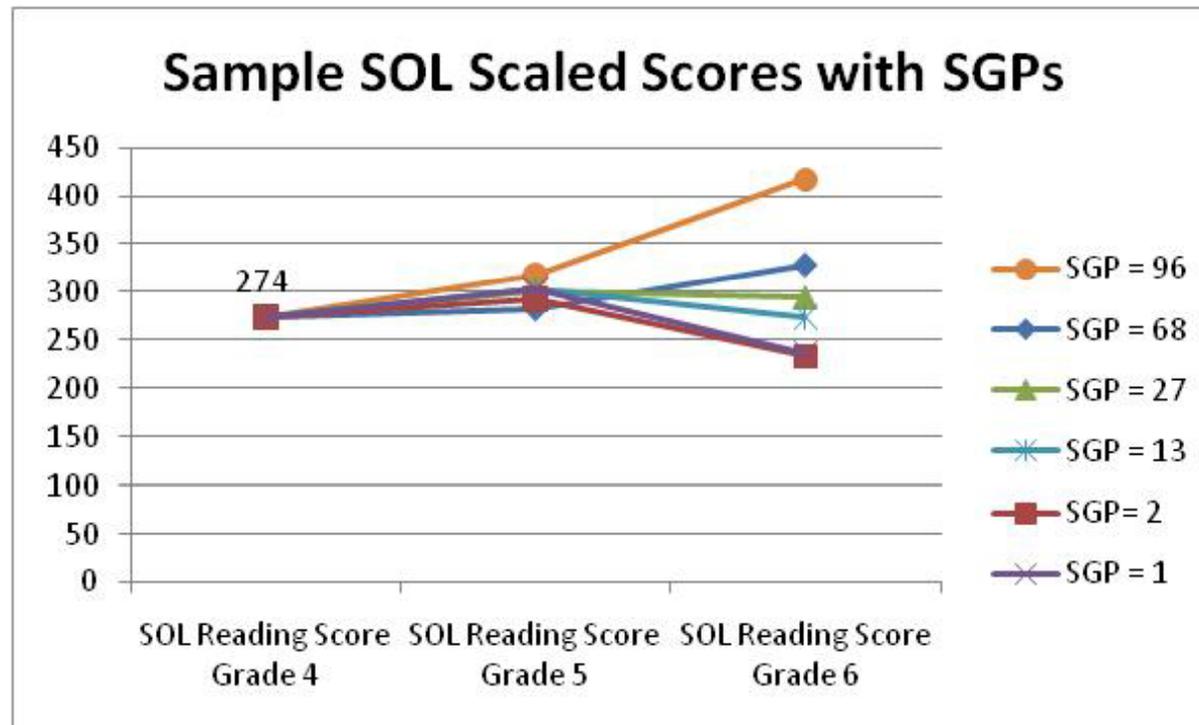
# SOL Data



# Student Growth Percentiles and SOL Scores



# Student Growth Percentiles and SOL Scaled Scores



# Potential Uses for Student Growth Percentiles

- School improvement & program evaluation
- Intervention & remediation
- Planning professional development
- One component of comprehensive performance evaluation
  - Consistent with the *Code of Virginia* requirement to incorporate measures of student academic progress in evaluations (§ 22.1-295).
  - Growth percentiles may form the basis of one of multiple measures of student progress when available and appropriate.
- Communications with students and parents

# Aggregate Reporting

- VDOE is developing aggregate reports for schools and divisions.
- Reports will provide information on the percent of students achieving low, moderate & high growth.
- Aggregate reporting anticipated no earlier than spring 2012.

# Growth Data Limitations

- Growth percentile data will not be available for some students who have taken the grades 4-8 reading tests and/or the mathematics tests for grades 4-8 or Algebra I.
- Three primary student groups will not have student growth percentiles available from the state:
  - Students with only one year of assessment data available.
  - Students who participated in Virginia's alternative assessment programs (VGLA, VSEP, VAAP) in the year of, or year prior to, the reporting year.
  - Students who participated in the traditional SOL assessment for two consecutive years but for whom no valid growth measure is available.
    - Student growth percentiles do not adequately capture growth for students who demonstrate the highest achievement on current assessments.
- As Virginia's assessments change, VDOE anticipates that more students will have student growth percentiles available in reading and mathematics.

## For More Information

Assessment and questions about growth calculations:  
[student\\_assessment@doe.virginia.gov](mailto:student_assessment@doe.virginia.gov)

Teacher performance evaluations:  
[licensure@doe.virginia.gov](mailto:licensure@doe.virginia.gov)

Data collection linking students and teachers:  
[resultshelp@doe.virginia.gov](mailto:resultshelp@doe.virginia.gov)