USING STATEWIDE STANDARDS OF LEARNING (SOL) RESULTS TO GUIDE INSTRUCTION

Guidance for Division Contractors

2013 Student Performance Analysis

- Content in English-Reading, Grade 3 through End of Course
- Content in Mathematics, Grades 3-8, Algebra I, Algebra II, and Geometry
- PowerPoint Presentations with Voice-over Narration
- Analysis by Specific SOL Standards with Examples and/or Suggestions
- Presentations Available for 2012 Student Performance Analysis

Purpose

Statewide results on mathematics and reading SOL tests were analyzed to determine specific **content for which overall student performance was weak or inconsistent.** The presentations below **provide examples of SOL content identified** by this analysis. Any sample questions provided in these presentations are not SOL test items and are not meant to mimic questions used on the SOL tests. Instead, they are intended to provide educators with **further insight into the concepts that challenged students statewide.**

Superintendent's Memo 051-014

Released February 28, 2014

http://www.doe.virginia.gov/administrators/superintendents_memos/2014/051-14.shtml

Available Online

2013 Student Performance Analysis

Mathematics: An analysis of tests administered in spring 2013		
Grade/Course	Presentation	PDF
Grade 3	Presentation	PDF
Grade 4	Presentation	PDF
Grade 5	Presentation	PDF
Grade 6	Presentation	PDF
Grade 7	Presentation	PDF
Grade 8	Presentation	PDF
Algebra I	Presentation	PDF
Geometry	Presentation	PDF
Algebra II	Presentation	PDF

Reading: An analysis of tests administered in spring 2013		
Grade/Course	Presentation	PDF
Grade 3	Presentation	PDF
Grade 4	Presentation	PDF
Grade 5	Presentation	PDF
Grade 6	Presentation	PDF
Grade 7	Presentation	PDF
Grade 8	Presentation	PDF
End-of-Course	Presentation	PDF

http://www.doe.virginia.gov/testing/sol/performance_analysis/index.shtml

Spring 2013 Student Performance Analysis

Grade 5 Mathematics Standards of Learning

Presentation may be paused and resumed using the arrow keys or the mouse.

Virginia Department of Education

Identifying Prime and Composite Numbers

SOL 5.3

The student will

a) **identify and describe the characteristics of prime and composite numbers; and**

b) **identify and describe the characteristics of even and odd numbers.**

Virginia Department of Education

Suggested Practice for SOL 5.3a

Students need additional practice distinguishing between numbers that are prime and numbers that are **composite.**

1. **Select all of the numbers that are prime.**

1 $\boxed{2}$ 21 $\boxed{37}$ 49 51 77 $\boxed{97}$

2. **How many of the numbers listed below are composite?**

2 11 $\boxed{27}$ $\boxed{33}$ $\boxed{52}$ 61 73 $\boxed{81}$ $\boxed{91}$

Five of the numbers are composite.

Virginia Department of Education

Suggested Practice for SOL 5.3b

Students need additional practice describing the characteristics of even numbers and odd numbers.

Which statements are true?

A number that is divisible by two is odd.

The sum of an even number and an odd number is odd.

An even number is a multiple of two.

Odd numbers have an odd number or a zero in the ones place.

The sum of two odd numbers is even.

Guidance Documents

- Provide an overview of the SOL Student Performance Analysis PowerPoint presentations created for schools.
- Offer talking points for the division contractor to discuss with division or school contacts about specific weak areas.

- **Note:** The guidance documents are created for division contractor use only.
- Do not share with divisions or schools—they should refer to the online presentations.

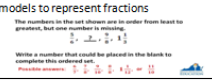
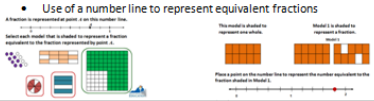
Guidance Document Activity

2013 Student Performance Analysis
Guidance for Office of School Improvement Division Contractors
2014

Statewide results on mathematics and reading SOL tests were analyzed to determine specific content for which overall student performance was weak or inconsistent. The presentations provide examples of SOL content identified by this analysis. Example items are not meant to mimic questions used on the SOL tests. Instead, they are intended to provide educators with further insight into the concepts that challenged students statewide.

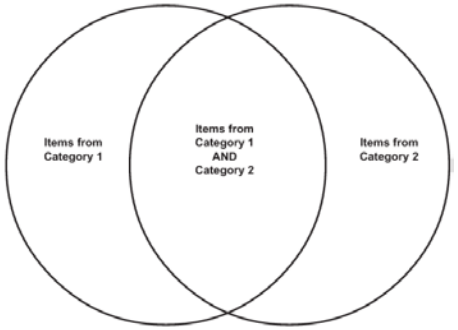
Division Contractors can use this information to target assistance for school divisions in the area of need as indicated by school performance data from the SOL assessments and the Academic Review findings.

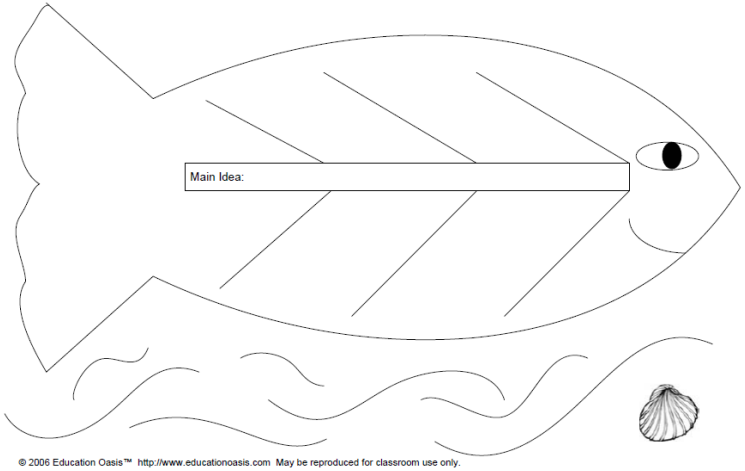
Note: Only the standard number and challenge area are highlighted below as in the Student Performance Analysis Power Point presentations. For a complete listing of the standard, please see the Standards of Learning Curriculum Framework.

Content Area: Mathematics Grade 4	
Standard/Challenge Area	**Additional practice and examples**
4.2a/ Compare and order fractions and mixed numbers	• Practice ordering fraction and mixed numbers • Use of models to represent fractions  The numbers in the set shown are in order from least to greatest, but one number is missing. $\frac{5}{6}$, $\frac{7}{8}$, $\frac{9}{8}$, $1\frac{1}{3}$ Write a number that could be placed in the blank to complete this ordered set. Possible answers: $\frac{5}{6}$, $\frac{7}{8}$, $\frac{9}{8}$, $\frac{9}{8}$, $1\frac{1}{3}$, or $\frac{11}{10}$
4.2b/ Represent equivalent fractions	• Use of models to represent fractions • Use of a number line to represent equivalent fractions  A fraction is represented at point A on this number line. Select each model that is shaded to represent a fraction equivalent to the fraction represented by point A. This model is shaded to represent one whole. Model 1 is shaded to represent a fraction. Place a point on the number line to represent the number equivalent to the fraction shaded in Model 1.
4.3b/ Round decimals to the nearest whole number, tenth, and hundredth	• Practice rounding large and small numbers with decimals Number to Round: 1,498.954 | Round to the Nearest Whole Number: 1,499 | Round to the Nearest Tenth: 1,499.0 | Round to the Nearest Hundredth: 1,498.95
4.3d/ Give a model, write the decimal and fraction equivalents	• Use of decimal models to represent decimals or fractions *See example for 4.2b and write fractions for each model
4.4a/ Estimate products of whole numbers	• Use of word problems with ***estimated*** answers/solutions Example: A one-gallon buck of paint is on sale for $39. Which is the closest to the total cost of 19 of those buckets of paint? a) $800 b) $600 c) $400 d) $300
4.4d/ Solve single step and multistep addition, subtraction, and multiplication problems with whole numbers	• Use of word problems • Identify important information in a word problem which requires at least one step of multiplication Example: Candace practiced for her piano lesson. She practiced a total of 35 minutes on the weekend. She also practiced for 25 minutes on each of 3 days after school. What was the total number of minutes Candace practiced for her piano lesson on these days? 35 + (25 x 3) = 35 + 75 = 110

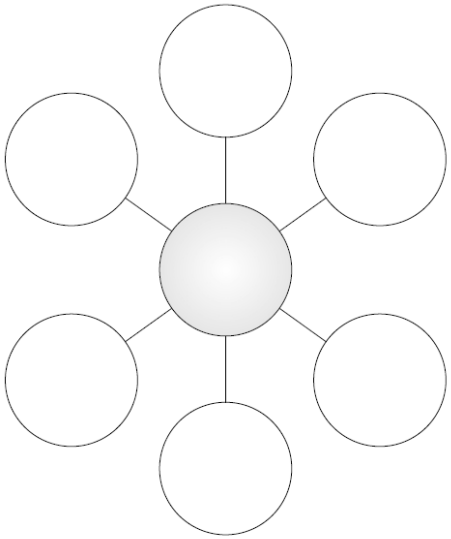
Choose a format to compare two grade levels of the same content.

Venn Diagram



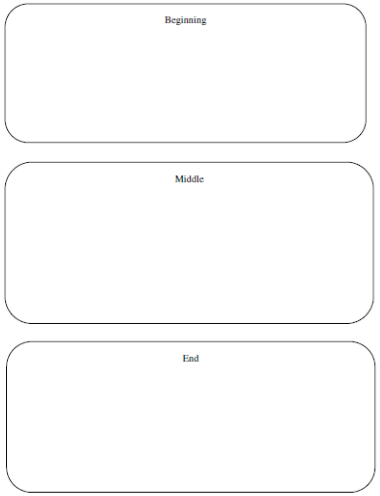


Cluster Web



Story Map

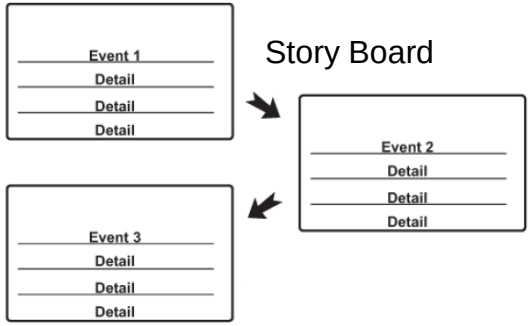
Title: _____ Author: _____



Making text to world connections

The text said . . .	This reminds me of . . .

Story Board



Mathematics Highlights

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English-Reading Highlights

Next Steps

- Review SOL analysis presentations online.
- Prepare for discussions with principals and/or division staff based on areas of need (AMOs not met; warned subjects for accreditation).
- Encourage use of the SOL analysis presentations for SOL review, grade level/content area meetings (immediate), professional development (summer).

Questions?

References

Adler, C. R. (2014). Seven strategies to teach students text comprehension. *Reading Rockets*. Retrieved from http://www.readingrockets.org/article/3479

Education Oasis. (2014). Graphic Organizer. Retrieved from http://www.educationoasis.com/curriculum/graphic_organizers.htm

Virginia Department of Education. (2014). *2014 Student Performance Analysis. Using statewide SOL tests to guide instruction. Retrieved from* http://www.doe.virginia.gov/testing/sol/performance_analysis/index.shtm