2014 Teaching Tips from PAWS 2015 Teacher Item Review

Allowable Resources— Scratch paper is now an allowable resource during every section of the PAWS and SAWS test (Reading, Writing, Science, and Math.) This includes patty/tracing paper, graph/grid paper, and lined/copy paper. As it was for the 2014 PAWS administration, there will not be a reference sheet for the math portion. For instance, a math standard might state a student should 'know' the area of a circle. Therefore, they will not be given the formula. If an item needs a formula or conversion that is not part of the standard being assessed, it will be given in the problem on the assessment.

Vocabulary/ Terminology on PAWS— Test designers often refer to language used in the standards when writing items. So, it is good practice to use and encourage this language with your students. For example, if a Language Art's standard employs the literary term "drama", use this word as frequently as "play", so students are familiar when they see the word "drama" on a test form.

Math Vocabulary— The educators at our PAWS Item Review (July 2014) felt the following were important to stress.

3rd Grade Vocabulary	4th Grade Vocabulary	5th Grade Vocabulary
• Terms of 4 operations (sum, difference, product, quotient)	• Divisor, Dividend, Quotient, Product	• Parentheses ( ), Braces { }, & Brackets [ ]
• Terms in patterns	• Inequality	• Divisor, Dividend, Quotient, Product
• Division signs (all including fraction bar)	• Place Value	
• Multiple	• Multiplicative	

6th Grade Vocabulary	7th Grade Vocabulary	8th Grade Vocabulary
• Divisor, Dividend, Quotient, Product	• Proportional Relationships	• Mean Absolute Deviation (MAD)
• Spent, Deposit, Withdraw, Earned, Donated…	• Variability	• Absolute Deviation
• Mean & Median	• Quotients	• Initial Value
• Interquartile Range (IQR)		• Pattern of Association
• Mean Absolute Deviation (MAD)		• Bivariate Data
• Variability		

2014 Teaching Tips from PAWS 2015 Teacher Item Review (cont.)

Math Concepts — The educators at our PAWS Item Review (July 2014) also wanted to stress teaching the following concepts in mathematics.

3rd Grade Concepts

- Number Sentence & Equation (can be used interchangeably)
- Know multiplication facts (x12) within 100
- Know how to add with both horizontal (35 + 15 = 50) and vertical alignment

$$\begin{array}{r} 35 \\ +\ 15 \\ \hline 50 \end{array}$$

- 3.NF.1—items can be set up with fractions that are not a whole (< 1)
- 3,NF.2—Fractions on a number line are not bound between 0 and 1. (i.e. 2-3/4)
- Help students understand that a square or rectangle can be partitioned into 2 equal triangles. (3.G.2)
- Work on having answer options of 'both' and 'neither' are correct
- Use number line diagrams to measure time intervals and elapsed time
- Know and understand all categories of shapes as given in the standards

6th Grade Concepts

- 6.NS.5—practice with real-world application
- Focus more on Statistics and Probability domain
- Students need more experience with box & whisker plots and need to understand the meanings

4th Grade Concepts

- Know the metric and standard units of measurement
- Know the difference between area and perimeter; know what they mean, not just how to find

7th Grade Concepts

- $-(a/b) = (?a/?b)$ determine sign placement to make this true
- Percent decrease
- 7.EE.2
- Factoring and expanding in the same problem
- Area models with equivalent expressions
- Solution set { } (learned in 6th gr.)
- Constructions
- Quantities (quantities can be both variables and constants)
- Quotients
- Problems involving decimals and fractions in them
- Factoring (pulling out the negative)
- Cross sections
- Writing in terms of pi
- Scale drawings

5th Grade Concepts

- Teach multiplication of fractions in a vertical manner
- Work with students on tables and teach them how to organize and read information.
- Help students understand that the following are two formats that say the same thing:

$$\dfrac{12-5}{5\ x\ 4} \qquad \dfrac{12}{20} - \dfrac{5}{20}$$

8th Grade Concepts

- add & subtract with scientific notation
- Solution of a system of equations (no solution, infinite solution, zero solution)
- Quadratic functions (more conceptual than use)
- Sphere formula
- Increasing & decreasing functions
- $2 < x < 5$ etc….
- Process of taking a root and estimating out to 2 decimal places
- Cube roots
- Standard form for a system of equations