Idaho Core Math Standards: FOURTH GRADE Quick Guide

This is a one page "big picture" overview. We use the Pearson Envisions and Investigations Math programs.

Essential Skills:

Operations and Algebraic Thinking:

- Use the four operations with whole numbers to solve problems.
- Gain familiarity with factors and multiples.
- Generalize and analyze patterns.

Number and Operations in Base Ten:

- Generalize place value understanding for multi-digit whole numbers.
- Use place value understanding and properties of operations to perform multi-digit arithmetic.

Number and Operations--Fractions:

- Extend understanding of fraction equivalence and ordering.
- Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.
- Understand decimal notation for fractions and compare decimal fractions.

Measurement and Data:

- Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.
- Represent and interpret data.
- Geometric Measurement: understand concepts of angles and measure angles.

Geometry:

- Draw and identify lines and angles, and classify shapes by properties of their lines and angles.

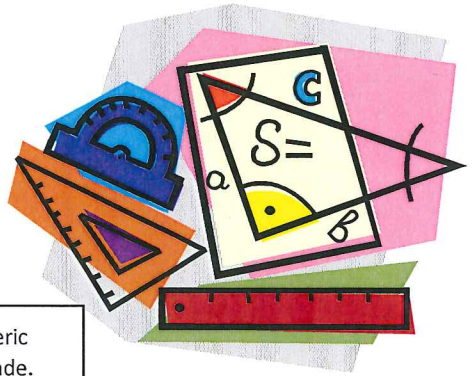
Mathematical Practices

1. **Make sense of problems and persevere in solving them.**
2. **Reason abstractly and quantitatively.**
3. **Construct viable arguments and critique the reasoning of others.**
4. **Model with mathematics.**
5. **Use appropriate tools strategically.**
6. **Attend to precision.**
7. **Look for and make use of structure.**
8. **Look for and express regularity in repeated reasoning.**

"Must Haves" in preparation for Fifth Grade:

By the end of the year, all students will be able to:

1. Determine whether a whole number in the range 1-100 is prime or composite.
2. Fluently add and subtract multi-digit whole numbers using the standard algorithm.
3. Multiply a whole number of up to four digits by a one-digit whole number; multiply two two-digit numbers.
4. Add and subtract mixed numbers with like denominators.



*"Must Haves" represent the most critical numeric requirements needed to advance to the next grade. Much more instruction and learning is required and outlined in the standards.

Core Standards Vocabulary

(Review third grade list—attached)

Operations and Algebraic Thinking

Multiplication equation
Mental computation
Estimation strategies
Factors and factor pairs
Multiples
Prime and composite numbers
Properties of operations

Number and Operations in Base 10

Algorithm
Quotients
Dividends
Divisors
Numerator
Denominator
Mixed numbers
Equivalent fractions
Properties of operations

Number and Operations--Fractions

Equivalence
Decomposition
Visual Fraction model
Mixed number
Decimal notation for fractions

Measurement and Data
Conversion table
Time intervals
Measurement scale
Area formulas
Perimeter formulas
Line plot
Data
Endpoint
Circular arc
Intersect
One-degree angles
Protractor

Geometry
Points
Lines
Line segment
Rays
Angles (acute, obtuse, right)
Parallel lines
Perpendicular lines
Right triangle
Line of symmetry