MathLinks: Essentials
Grade 6 Checklist

These four packets address essential 5th grade topics, the major work of the grade. Can your 6th grade students do the following?

Whole Number Multiplication and Division (NBT1) explores whole number multiplication and division (standards 4.OA, 4.NBT.B, 5.NBT.B, 6.NS.B).

- Know strategies for multiplying single digit numbers (e.g. 8×9 is equivalent to doubling 4×9) and numbers that include powers of 10 (e.g. 80×90). [1, 2]
- Use an area model for multi-digit multiplication. [3]
- Perform long division using a chunking strategy. [4]
- Understand and use the standard algorithms for multiplication and division. [5]

Fraction Concepts and Equivalence (FR1) includes comparing and ordering fractions, and working with equivalence (standards 3.NF.A, 4.NF.A).

- Write inequalities that compare fractions. [6]
- Estimate the location of fractions on the number line. [7]
- Convert between mixed numbers and improper fractions using pictures and procedures. [8]
- Write a fraction in equivalent ways using pictures and procedures. [9, 10, 11]
- Clearly explain their thinking about fraction concepts. [10]
- Solve problems using non-routine strategies. [embedded in packet]

Fraction Addition and Subtraction (FR2) is all about adding and subtracting fractions, relying heavily on visuals to help students make sense of the content before moving to rules and procedures (standards 4.NF.B, 5.NF.A).

- Add fractions mentally. [12]
- Estimate fraction sums and differences. [13]
- Add and subtract fractions using pictures and procedures. [14, 15 ,16]
- Explain why common denominators are needed to add and subtract fractions and address typical misconceptions for adding and subtracting fractions. [17]

Fraction Multiplication and Division (FR3) does the same in addressing fraction multiplication and division (standards 5.NF.B, 6.NF.A).

- Multiply any combination of whole numbers, fractions, or mixed numbers using pictures and procedures. [18, 19]
- Make sense of dividing fractions using either the “divide-across” or the “multiply-by-the-reciprocal” rule. [20, 21]
- Explain or show pictorially where the rules for multiplying and dividing fractions come from. [22]