**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.

**Common Core Coding Explanation**

5th Grade          Cluster          Standard

5.OA.A.1
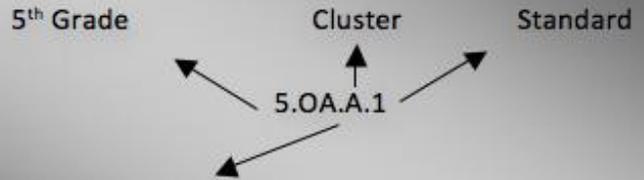
Domain:
OA: Operations and Algebraic Thinking
NBT: Number and Operations in Base Ten
NF: Numbers and Operations in Fractions
MD: Measurement and Data
G: Geometry

| Common Core State Standard | Aligned Textbook Lessons/Activities |
|---|---|
| **Dividing Fractions – Suggested 12 Days** ||
| 5.NF.B.7.    Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.[11] Students able to multiply fractions in general can develop strategies to divide fractions in general, by reasoning about the relationship between multiplication and division. But division of a fraction by a fraction is not a requirement at this grade. | |
| a. 5.NF.B.7a. Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. *For example, create a story context for (1/3) ÷ 4, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that (1/3) ÷ 4 = 1/12 because (1/12) × 4 = 1/3.* | |
| b. 5.NF.B.7b. Interpret division of a whole number by a unit fraction, and compute such quotients. *For example, create a story context for 4 ÷ (1/5), and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that 4 ÷ (1/5) = 20 because 20 × (1/5) = 4.* | |

| | |
|---|---|
| c. Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, how much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 1/3-cup servings are in 2 cups of raisins?* | |
| 5.OA.A.2. Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. *For example, express the calculation "add 8 and 7, then multiply by 2" as 2 × (8 + 7). Recognize that 3 × (18932 + 921) is three times as large as 18932 + 921, without having to calculate the indicated sum or product.* | |
| 5.OA.A.1. Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols. | |
| **Volume – Suggested 25 Days** | |
| 5.MD.C.3. Recognize volume as an attribute of solid figures and understand concepts of volume measurement. | |
| a. 5.MD.C.3a. A cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume. | |
| b. .MD.C.3b. A solid figure which can be packed without gaps or overlaps using *n* unit cubes is said to have a volume of *n* cubic units. | |
| 5.MD.C.4. Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and | |

| | |
|---|---|
| improvised units. | |
| <mark>5.MD.C.5.</mark> Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. | |
| A. 5.MD.C.5a. Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication. | |
| B. 5.MD.C.5b. Apply the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems. | |
| C. Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems. | |
| **Measurement – Suggested 8 Days** | |
| <mark>5.MD.A.1</mark>. Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems. | |