Standards Correlated to **Mathematics Readers Grade 4 10818**

New York State P-12 Common Core Learning Standards
Grade 4
  Mathematics

STRAND / DOMAIN	NY.CC.4.MP.	Mathematical Practices
CATEGORY / CLUSTER	4.MP.4.	Model with mathematics.
		Correlated Lessons: **Patterns In Nature Reader; Looking at Maps Reader; Journeys: Land, Air, Sea Reader Objective 40: Understands that mathematicians often represent real things with abstract ideas; then work with the abstractions to learn about the things they represent**
		The Bake Sale Reader Objective 30: Represents problem situations in a variety of forms (e.g., translates from a bar graph to a symbolic/algebraic expression)
STRAND / DOMAIN	NY.CC.4.OA.	Operations and Algebraic Thinking
CATEGORY / CLUSTER		Use the four operations with whole numbers to solve problems.
STANDARD	4.OA.2.	Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.
		Correlated Lessons: **Life in the Ocean Layers Reader; All About Sharks Reader Objective 53: Solves real-world problems involving number operations (e.g., computations with units of measurement)**
		The Bread Book Reader; The Bake Sale Reader

Objective 27: Solves real-world problems involving number operations--multiplication/division (e.g., computations with money, computations with recipes, computations with manufacturing and service business)

STANDARD	4.OA.3.	Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

Correlated Lessons:
Life in the Ocean Layers Reader; All About Sharks Reader Objective 53: Solves real-world problems involving number operations (e.g., computations with units of measurement)

Olympic Technology Reader; Hosting the Olympic Summer Games Reader Objective 51: Solves real-world problems involving number operations--addition and subtraction (e.g., determines elapsed time and timed races)

The Bread Book Reader; The Bake Sale Reader Objective 27: Solves real-world problems involving number operations--multiplication/division (e.g., computations with money, computations with recipes, computations with manufacturing and service business)

CATEGORY / CLUSTER		Generate and analyze patterns.
STANDARD	4.OA.5.	Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule "Add 3" and the starting number 1, generate terms in the

resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.

Correlated Lessons:
Patterns Around Us Reader; Patterns in Nature Reader Objective 35: Recognizes a variety of number patterns (e.g., basic linear patterns such as [2,4,6,8&]; simple repeating, growing patterns) and the rules that explain them

Patterns Around Us; Patterns in Nature Page 84, 89 Objective 07: Students will recognize, analyze, and extend a wide variety of numerical and shape patterns and verbalize the rules that explain them.

Patterns In Nature Reader Objective 39: Under that a simple numerical or shape pattern can be represented in different ways (ie, geometrically or numerically; the pattern of numbers [7,14,21,28&] is equivalent to the mathematical relationship 7 X 9)

STRAND / DOMAIN	NY.CC.4.NBT.	Number and Operations in Base Ten
CATEGORY / CLUSTER		Use place value understanding and properties of operations to perform multi-digit arithmetic.
STANDARD	4.NBT.5.	Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

Correlated Lessons:
Olympic Technology Reader; Hosting the Olympic Summer Games Reader Objective 49: Uses a variety of strategies to understand problem situations (e.g., modeling problem with diagrams or physical objects,

counting backward, identifying a pattern)

STRAND / DOMAIN	NY.CC.4.NF.	Number and Operations--Fractions
CATEGORY / CLUSTER		Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.
STANDARD	4.NF.4.	Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.
EXPECTATION	4.NF.4.b.	Understand a multiple of a/b as a multiple of 1/b, and use this understanding to multiply a fraction by a whole number. For example, use a visual fraction model to express 3 x (2/5) as 6 x (1/5), recognizing this product as 6/5. (In general, n x (a/b) = (n x a)/b.)

Correlated Lessons:
The Bread Book; The Bake Sale Page 36, 41
Objective 01: Students will multiply and divide
whole numbers and fractions.

EXPECTATION	4.NF.4.c.	Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. For example, if each person at a party will eat 3/8 of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?

Correlated Lessons:
The Bread Book; The Bake Sale Page 36, 41
Objective 01: Students will multiply and divide
whole numbers and fractions.

STRAND / DOMAIN	NY.CC.4.MD.	Measurement and Data
CATEGORY / CLUSTER		Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.
STANDARD	4.MD.1.	Know relative sizes of measurement units within one

system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ...

Correlated Lessons:
Life in the Ocean Layers Reader; All About Sharks Reader Objective 55: Knows approximate size of basic standard units or measurement (e.g., centimeters, liters, pounds, tons) and relationships between them.

STANDARD   4.MD.2.

Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.

Correlated Lessons:
Life in the Ocean Layers Reader; All About Sharks Reader Objective 53: Solves real-world problems involving number operations (e.g., computations with units of measurement)

Olympic Technology Reader; Hosting the Olympic Summer Games Reader Objective 51: Solves real-world problems involving number operations-- addition and subtraction (e.g., determines elapsed time and timed races)

Olympic Technology; Hosting the Olympic Summer Games Page 156, 161 Objective 16: Students will understand and apply the basic concept of elapsed

time.

**The Bread Book Reader; The Bake Sale Reader
Objective 27: Solves real-world problems involving
number operations--multiplication/division (e.g.,
computations with money, computations with
recipes, computations with manufacturing and
service business)**