

Agawam Public Schools Grade 6 Math Curriculum

Number Sense and Operations

Grade 6

| <u>Learning Standards</u> | <u>Benchmarks</u> | <u>Essential Questions</u> | <u>Resources/Lessons</u> |
|---|--|--|------------------------------------|
| 6.N.1 Demonstrate an understanding of positive integer exponents, in particular, when used in powers of ten, e.g., 10^2 , 105. | 6.N.1 Demonstrate an understanding of positive integer exponents. | How do you evaluate a base raised to an exponent? What is the order of operations in an expression that includes exponents? | Prentice Hall - 2.8 |
| 6.N.2 Demonstrate an understanding of place value to billions and thousandths. | 6.N.2 Demonstrate an understanding of place value to at least hundred billions and thousandths. Read numbers through the hundred billions. | What is the expanded form of a number? How do you compare whole numbers? | Prentice Hall - 1.1, 1.2 |
| 6.N.3 Represent and compare very large (billions) and very small (thousandths) positive numbers in various forms such as expanded notation with exponents. | 6.N.3 Represents and compare very large at least (hundred billions) positive numbers in various forms such as expanded notation with exponents. | When writing a number in words when do you use "and"? | Prentice Hall - 1.1, 1.2 |
| 6.N.4 Demonstrate an understanding of fractions as a ratio of whole numbers, as parts of unit wholes, as parts of a collection and as locations on the number line. | 6.N.4 Demonstrate an understanding of fractions as ratios of whole numbers, part of a collection. | What is a ratio? What are equal ratios? | Prentice Hall - 3.4, 6.1, 6.2, 6.4 |
| 6.N.5 Identify and determine common equivalent fractions, mixed numbers, decimals and percents. | 6.N.5 Identify and determine common equivalent fractions, mixed numbers, decimals and percents. Investigate and describe the relationship among fractions, decimals and percents. | What are equivalent fractions? When is a fraction in simplest form? | Prentice Hall - 3.7, 6.6 |
| 6.N.6 Find and position integers (both positive and negative), fractions, mixed numbers and decimals on the number line. | 6.N.6 Find and position integers (both positive and negative), on the number line. Find and position both positive and negative integers, fractions, mixed numbers and decimals on a number line, in an ordered list, or in relation to zero. | What are three different methods for ordering decimals? How can you explain place value to compare two decimals? | Prentice Hall - 1.3, 3.8 |

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Grade 6

| <u>Learning Standards</u> | <u>Benchmarks</u> | <u>Essential Questions</u> | <u>Resources/Lessons</u> |
|---|--|--|---|
| 6.N.7 Compare and order integers (including negative integers), and positive fractions, mixed numbers, decimals and percents. | 6.N.7 Compare whole numbers, fractions integers (including negative) and decimals using the "<" and ">" symbols. | How do you compare two fractions? How do you order fractions? | Prentice Hall - 1.3, 3.7, 3.8 |
| 6.N.8 Apply number theory concepts-including prime and composite numbers, prime factorization, greatest common factor, least common multiple and divisibility rules for 2, 3, 4, 5, 6, 9 and 10 to the solution of problems. | 6.N.8 Apply number theory concepts-including prime and composite numbers, prime factorization , greatest common factor, least common multiple and divisibility rules for 2, 3, 4, 5, 6, 9 and 10 to the solution of problems. | What is the prime factorization of a number? | Prentice Hall - 3.2, 3.3, 3.6 |
| 6.N.9 Selects and use appropriate operations to solve problems involving addition, subtraction, multiplication, division and positive integer exponents with whole numbers and with positive fractions, mixed numbers, decimals and percents. | 6.N.9 Selects and use appropriate operations to solve problems involving subtraction with mixed numbers (with regrouping), positive integer exponents with whole numbers and division with fractions, mixed numbers, decimals and percents. Determine if there is too little or too much information when solving problems. | What are three steps of the problem-solving plan? | Prentice Hall - 1.5, 1.6, 1.7, 1.9, 4.8, 5.6, 6.7, 9.10 |
| 6.N.10 Use the number line to model addition and subtraction of integers, with the exception of subtracting negative integers. | 6.N.10 Use the number line to model addition and subtraction of integers, with the exception of subtracting negative integers. | Explain how to add integers with the same sign? Explain how to add integers with different signs? | Prentice Hall - 10.2, 10.3 |
| 6.N.11 Apply the Order of Operations for expressions involving addition, subtraction, multiplication and division with grouping symbols. | 6.N.11 Apply the Order of Operations for expressions involving addition, subtraction, multiplication and division with grouping symbols. | What is the order in which operations must be performed? | Prentice Hall - 1.10, 2.8 |

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Number Sense and Operations

Grade 6

| <u>Learning Standards</u> | <u>Benchmarks</u> | <u>Essential Questions</u> | <u>Resources/Lessons</u> |
|---|---|---|---|
| 6.N.12 Demonstrate an understanding of the inverse relationship of addition and subtraction and use that understanding to simplify computations and solve problems. | 6.N.12 Demonstrate knowledge of identities and inverses for all four operations. | What are inverse operations? How do you use subtraction to solve an equation? How do you use addition to solve an equation? | Prentice Hall - 2.6 Prentice Hall - 9.10 |
| 6.N.13 Accurately and efficiently add, subtract, multiply and divide (with double-digit divisors) whole numbers and positive decimals | 6.N.13 Accurately and efficiently add, subtract, multiply and divide (with double-digit divisors) whole numbers and positive decimals. | How do you add or subtract decimals? How do you use mental math to find sums? | Prentice Hall - 1.5, 1.7, 1.8, 1.9 |
| 6.N.14 Accurately and efficiently add, subtract, multiply and divide positive fractions and mixed numbers. Simplify fractions. | 6.N.14 Accurately and efficiently add, subtract, multiply and divide positive fractions. Simplify fractions. Accurately and efficiently add, subtract (with regrouping), multiply and divide mixed numbers. Simplify fractions. | How do you write a mixed number as an improper fraction? How do you write an improper fraction as a whole or mixed number? | Prentice Hall - 3.4, 3.5 Prentice Hall - 4.2, 4.3, 4.4, 4.5 Prentice Hall - 5.1, 5.2, 5.3 |
| 6.N.15 Add and subtract integers, with the exception of subtracting negative integers. | 6.N.15 Add and subtract integers, with the exception of subtracting negative integers. | What is the rule for subtracting integers? | Prentice Hall - 10.2, 10.3 |
| 6.N.16 Estimate results of computations with whole numbers and with positive fractions, mixed numbers, decimals and percents. Describe reasonableness of estimates. | 6.N.16 Estimate the results of computations with whole numbers and with positive fractions, mixed numbers, decimals and percents. Describe the reasonableness of estimates. | When is 0 a good benchmark value for a fraction? When is $\frac{1}{2}$ a good benchmark value for a fraction? | Prentice Hall - 4.1 Prentice Hall 5.6 Prentice Hall 6.8 Page 481 --- 1-4 |

Agawam Public Schools Grade 6 Math Curriculum

Patterns, Relations and Algebra

Grade 6

| <u>Learning Standards</u> | <u>Benchmarks</u> | <u>Essential Questions</u> | <u>Resources/Lessons</u> |
|---|---|---|---|
| 6.P.1 Analyze and determine the rules for extending symbolic, arithmetic and geometric patterns and progressions, e.g., ABBCCC: 1, 5, 9, 13,.....; 3, 9, 27,..... | 6.P.1 <ul style="list-style-type: none"> • Recognize and extend sequences of numbers involving whole numbers, fractions and decimals. • Recognize and extend patterns of various two- and three-dimensional shapes. • Extend patterns, organize information and make tables to solve problems. | What is a number pattern? What is a term of a pattern? How do you describe a number pattern? | Prentice Hall - 2.1 |
| 6.P.2 Replace variables with given values and evaluate/simplify, e.g., $2(O) + 3$ when $O = 4$ | 6.P.2 <ul style="list-style-type: none"> • Recognize the term "variable" as used in an equation. • Determine the numerical value of an algebraic expression | What is a variable? What is an algebraic expression? What does it mean to evaluate an algebraic expression? | Prentice Hall - 2.2 |
| 6.P.3 Use the properties of equality to solve problems, e.g., if $\square + 7 = 13$, then $\square = 13 - 7$, therefore $\square = 6$; if $3 \times \square = 15$, then $1/3 \times 3 \times \square = 1/3 \times 15$, therefore $\square = 5$. | 6.P.3 Use the properties of equality to solve problems (including fractions and decimals) e.g., if $3 \times \square = 15$, then $1/3 \times 3 \times \square = 1/3 \times 15$, therefore $\square = 5$. | How do you use division to solve an equation? How do you use multiplication to solve and equation? | Prentice Hall - 2.5, 2.6, 2.7 Prentice Hall - 5.5 |
| 6.P.4 Represent real situations and mathematical relationships with concrete models, tables, graphs and rules in words and with symbols, e.g., input/output tables. | 6.P.4 <ul style="list-style-type: none"> • Construct expressions, equations and inequalities that describe real-world problems using a symbol to represent the "missing number". • Collect data from an experiment and express the data in a table of values. | How do you write a word phrase as an algebraic expression? How do you describe an algebraic expression in words? | Prentice Hall - 2.2, 2.3 Prentice Hall - 4.6 Prentice Hall - 6.9 Prentice Hall - 8.6 |

Agawam Public Schools Grade 6 Math Curriculum

Patterns, Relations and Algebra

Grade 6

| <u>Learning Standards</u> | <u>Benchmarks</u> | <u>Essential Questions</u> | <u>Resources/Lessons</u> |
|---|---|---|--------------------------|
| 6.P.5 Solve linear equations using concrete models, tables, graphs and paper-pencil methods. | 6.P.5 Solve linear equations using concrete models, tables, graphs and paper-pencil methods. | What is a function? When might you not connect the points of a function graph? | Prentice Hall - 10.8 |
| 6.P.6 Produce and interpret graphs that represent the relationship between two variables in everyday situations. | 6.P.6 <ul style="list-style-type: none"> • Analyze and describe data in tables and graphs orally and in writing, commenting on patterns and trends. • Create a graph using data from a table of values. | | Prentice Ha.. - 10.8 |
| 6.P.7 Identify and describe relationships between two variables with a constant rate of change. Contrast these with relationships where the rate of change is not constant. | 6.P.7 Identify and describe relationships between two variables with a constant rate of change. Contrast these with relationships where the rate of change is not constant. | | |

Agawam Public Schools Grade 6 Math Curriculum

Geometry

Grade 6

| <u>Learning Standards</u> | <u>Benchmarks</u> | <u>Essential Questions</u> | <u>Resources/Lessons</u> |
|---|--|--|------------------------------------|
| 6.G.1 identify polygons base on their properties, including types of interior angles, perpendicular or parallel sides and congruence of sides, e.g., squares, rectangles, rhombuses, parallelograms, trapezoids and isosceles, equilateral and right triangles. | 6.G.1 <ul style="list-style-type: none"> • Describe the distinction between similar and congruent figures. • Recognize vertical angles and adjacent angels formed by intersecting lines. • Describe the sum of angles of a quadrilateral. • Use the correct terminology to describe parts of angles. • Use the correct terminology to describe parts of triangle and quadrilaterals. • Draw all types of triangle, including scalene, isosceles and equilateral triangles. | How can you classify polygons? What are the five special quadrilaterals that have parallel sides? | Prentice Hall – 8.2, 8.3, 8.4, 8.5 |
| 6.G.2 Identify three-dimensional shapes (e.g., cubes, prisms, spheres, cones and pyramids) based on their properties, such as edges and faces. | 6.G. 2 <ul style="list-style-type: none"> • Describe and discuss three-dimensional figures. • Identify the relationship among vertices, faces and edges of three-dimensional figures. | What is a three-dimensional figure? | Prentice Hall – p. 461, 9.7 |
| 6.G.3 Identify relationships among points, lines and planes, e.g., intersecting, parallel, perpendicular. | 6.G.3 Identify relationships among points, lines and planes, e.g., intersecting, parallel, perpendicular. | What is a point, a line, a line segment and a ray? What are parallel lines and skew lines? | Prentice Hall – 8.1 |
| 6.G.4 Graph points and identify coordinates of points on the Cartesian coordinate plant (all four quadrants). | 6.G.4 <ul style="list-style-type: none"> • Graph points and identify coordinates of points on the Cartesian coordinate plane on all four quadrants. | What is the origin in the coordinate plane? | Prentice Hall – 10.6 |

Agawam Public Schools Grade 6 Math Curriculum

Geometry

Grade 6

| <u>Learning Standards</u> | <u>Benchmarks</u> | <u>Essential Questions</u> | <u>Resources/Lessons</u> |
|---|---|--|--------------------------|
| 6.G.5 Find the distance between two points on horizontal or vertical number lines. | 6.G.5 <ul style="list-style-type: none"> • Find the distance between two points on horizontal or vertical number lines. | | |
| 6.G.6 Predict, describe and perform transformations on two-dimensional shapes, e.g., translations, rotations and reflections. | 6.G.6 Predict, describe and perform transformations on two-dimensional shapes, e.g., translation, rotations and reflections. | How do you identify a translation, reflection or rotation? | Prentice Hall - 8.9 |
| 6.G.7 Identify types of symmetry, including line and rotational. | 6.G.7 Identify types of symmetry, including line and rotational. | When does a figure have a line of symmetry? | Prentice Hall - 8.8 |
| 6.G.8 Determine if two shapes are congruent by measuring sides or a combination of sides and angles, as necessary; or by motions or series of motions, e.g., translations, rotations and reflections. | 6.G.8 Determine if two shapes are congruent by measuring sides or a combination of sides and angles, as necessary; or by motions or series of motions, e.g., translations, rotations and reflections. Recognize reflections, slides and rotations. | How do you identify congruent figures? | Prentice Hall - 8.7 |
| 6.G.9 Match three-dimensional objects and their two-dimensional representations, e.g., nets, projections and perspective drawings. | 6.G.9 Match three-dimensional objects and their two-dimensional representations, e.g., nets, projections and perspective drawings. | How do you match a 3-D object with its 2-D representation? | Prentice Hall - 9.8 |

Agawam Public Schools Grade 6 Math Curriculum

Measurement

Grade 6

| <u>Learning Standards</u> | <u>Benchmarks</u> | <u>Essential Questions</u> | <u>Resources/Lessons</u> |
|--|--|--|---|
| 6.M.1 Apply the concepts of perimeter and area to the solution of problems. Apply formulas where appropriate. | 6.M.1 Apply the concepts of perimeter and area to the solution of problems. Apply formulas where appropriate. Explain how changes in one or more dimensions of a figure result in a change in the area or perimeter of the figure. Define the size of a region as area. | What is the difference between the area of a figure and the area of the figure? | Prentice Hall - 9.3, 9.4 |
| 6.M.2 Identify, measure, describe, classify and construct various angles, triangles and quadrilaterals. | 6.M.2 Identify, measure, describe, classify and construct various angles, triangles and quadrilaterals. | How are triangles classified by their angles? How are triangles classified by their angles? | Prentice Hall - 8.2, 8.4, 8.5 |
| 6.M.3 Solve problems involving proportional relationships and units of measurement, e.g., same system unit conversions, scale models, maps and speed. | 6.M.3 Solve problems involving proportional relationships and units of measurement, e.g., same system unit conversions, scale models, maps and speed. Use a ratio to create a simple scale drawing or map. Recognize unit conversions as ratios and proportions. | How do you choose an appropriate unit of measurement? When do you need to convert units of measure? How do you find the scale of a drawing or model? | Prentice Hall - 5.7, 5.8 Prentice Hall - 6.5 |
| 6.M.4 Find area of triangles and parallelograms. Recognize that shapes with the same number of sides but different appearances can have the same area. Develop strategies to find the area of more complex shapes. | 6.M.4 Find area of triangles and parallelograms. Recognize that shapes with the same number of sides but different appearances can have the same area. Develop strategies to find the area of more complex shapes. Recognize that complex regions can be divided into simpler regions. | How do you find the area of a complex shape? | Prentice Hall - 9.3, 9.4 |

Agawam Public Schools Grade 6 Math Curriculum

Measurement

Grade 6

| <u>Learning Standards</u> | <u>Benchmarks</u> | <u>Essential Questions</u> | <u>Resources/Lessons</u> |
|--|---|--|--|
| 6.M.5 Identify, measure and describe circles and the relationships of the radius, diameter, circumference and area and use the concepts to solve problems. | 6.M.5 <ul style="list-style-type: none"> • Recognize the ration between the circumference of a circle and its diameter as a little more than 3. • Use $\pi = 3/14$ in formulas to find area and circumference. | What is a chord? What is a diameter? How do you find the circumference of a circle? Explain how to find the area of a circle. | Prentice Hall - 9.5, 9.6 Investigation - p. 451 |
| 6.M.6 Find volumes and surface areas of rectangular prisms. | 6.M.6 Find volumes and surface areas of rectangular prisms. | What is the surface are of a prism? | Prentice Hall - 9.8, 9.9 |
| 6.M.7 Find the sum of the angles in simple polygons (up to eight sides) with and without measuring the angles. | 6.M.7 find the sum of the angles in simple polygons (up to at least eight sides) with and without measuring the angles. | How do you find the sum of the angles in a simple polygon? | Prentice Hall - 8.4, 8.6 P. 404 -- question 11 |

Agawam Public Schools Grade 6 Math Curriculum

Data Analysis, Statistics and Probability

Grade 6

| <u>Learning Standards</u> | <u>Benchmarks</u> | <u>Essential Questions</u> | <u>Resources/Lessons</u> |
|--|--|---|--|
| 6.D.1 Describe and compare data sets using the concepts of median, mean, mode, maximum and minimum and range. | 6.D.1 <ul style="list-style-type: none"> • Collect, organize and record data using the concepts of median, mean, mode, maximum and minimum and range. | How do you find the median of a set of data? | Prentice Hall - 7.1 |
| 6.D.2 Construct and interpret stem-and-leaf plots, line plots and circle graphs. | 6.D.2 Construct and interpret stem-and-leaf plots, line plots and circle graphs. Construct circle graphs. | How do you read a circle graph? How do you make a circle graph? What is a stem-and-leaf plot? | Prentice Hall - 7.5, 7.7 |
| 6.D.3 Use tree diagrams and other models (e.g., lists and tables) to represent possible or actual outcomes of trials. Analyze the outcomes. | 6.D.3 Use tree diagrams and other models (e.g., lists and tables) to represent possible or actual outcomes of trials. Analyze the outcomes. | What does a tree diagram show? | Prentice Hall - 11.3, 11.5, 11.6 |
| 6.D.4 Predict the probability of outcomes of simple experiments (e.g., tossing a coin, rolling a die) and test the predictions. Use appropriate ratios between 0 and 1 to represent the probability of the outcome and associate the probability with the likelihood of the event. | 6.D.4 <ul style="list-style-type: none"> • Compare the theoretical probability of an event occurring with experimental results. • Predict the probability of outcomes of simple experiments (e.g., tossing a coin, rolling a die) and test the predictions. • Use appropriate ratios between 0 and 1 to represent the probability of outcome. | How do you find the probability of an event? What is experimental probability? | Prentice Hall - 11.1, 11.2, 11.3, 11.4, 11.7 |

Agawam Public Schools Grade 6 September 2006

Chapter 1 & 2

Grade 6

Standards

Chapter 1

- 6.N.2 Demonstrate an understanding of place value to billions and thousandths.
- 6.N.3 Represent and compare very large (billions) and very small (thousandths) positive numbers in various forms such as expanded notation with exponents.
- 6.N.6 Find and position integers (both positive and negative), fractions, mixed numbers and decimals on the number line.
- 6.N.7 Compare and order integers (including negative integers), and positive fractions, mixed numbers, decimals and percents.
- 6.N.9 Selects and use appropriate operations to solve problems involving addition, subtraction, multiplication, division and positive integer exponents with whole numbers and with positive fractions, mixed numbers, decimals and percents.
- 6.N.11 Apply the Order of Operations for expressions involving addition, subtraction, multiplication and division with grouping symbols.
- 6.N.13 Accurately and efficiently add, subtract, multiply and divide (with double-digit divisors) whole numbers and positive decimals

Chapter 2

- 6.N.1 Demonstrate an understanding of positive integer exponents, in particular, when used in powers of ten, e.g., 10^2 , 105.
- 6.N.11 Same as above.
- 6.N.12 Demonstrate an understanding of the inverse relationship of addition and subtraction and use that understanding to simplify computations and solve problems.
- 6.P.1 Analyze and determine the rules for extending symbolic, arithmetic and geometric patterns and progressions, e.g., ABBCCC; 1, 5, 9, 13,; 3, 9, 27,
- 6.P.2 Replace variables with given values and evaluate/simplify, e.g., $2(O) + 3$ when $O = 4$
- 6.P.3 Use the properties of equality to solve problems, e.g., if $\square + 7 = 13$, then $\square = 13 - 7$, therefore $\square = 6$; if $3 \times \square = 15$, then $1/3 \times 3 \times \square = 1/3 \times 15$, therefore $\square = 5$.
- 6.P.4 Represent real situations and mathematical relationships with concrete models, tables, graphs and rules in words and with symbols, e.g., input/output tables.

Vocabulary Chapter 1

| | |
|------------------------|---------------------|
| associative properties | identity properties |
| commutative properties | order of operations |
| compatible properties | repeating decimal |
| expanded form | standard form |
| front-end estimation | terminating decimal |

Vocabulary Chapter 2

| | |
|-----------------------|------------------------|
| algebraic expression | numerical expression |
| base | power |
| distributive property | variable |
| exponent | term |
| inverse operations | properties of equality |

| Monday | Tuesday | Wednesday | Thursday | Friday |
|--------------|--------------|------------------------------------|----------------|--------------|
| | | | | 1 Pro Dev |
| 4 Holiday | 5 Pro Dev | 6 1 st day of school | 7 Chapter 1 | 8 |
| 11 | 12 | 13 | 14 | 15 |
| 18 | 19 | 20 | 21 | 22 |
| 25 | 26 | 27 | 28 | 29 |

Assessment Schedule by Chapter

Quick -- Diagnosing Readiness - Beg of Chap.
Pre-Test -Assessment Manual
Quiz - MCAS Section A Quiz - MCAS Manual
Quiz - MCAS Section B. Quiz - MCAS Manual
Quiz - MCAS Section C Quiz - MCAS Manual
End of Chap. Test for Practice - Text
Test - Chap. Test A or B - Assessment Manual
Test - Cumulative Review & Test Prep. - Text

Agawam Public Schools Grade 6 October 2006

Chapter 3

Grade 6

Standards

- 6.N.4 Demonstrate an understanding of fractions as a ratio of whole numbers, as parts of unit wholes, as parts of a collection and as locations on the number line.
- 6.N.5 Identify and determine common equivalent fractions, mixed numbers, decimals and percents.
- 6.N.6 Find and position integers (both positive and negative), fractions, mixed numbers and decimals on the number line.
- 6.N.7 Compare and order integers (including negative integers), and positive fractions, mixed numbers, decimals and percents.
- 6.N.8 Apply number theory concepts-including prime and composite numbers, prime factorization, greatest common factor, least common multiple and divisibility rules for 2, 3, 4, 5, 6, 9 and 10 to the solution of problems.
- 6.N.14 Accurately and efficiently add, subtract, multiply and divide positive fractions and mixed numbers. Simplify fractions.

Vocabulary

| | |
|--------------------------------|---------------------|
| common factor | improper fraction |
| common multiple | mixed number |
| composite number | prime factorization |
| divisible | prime number |
| equivalent fractions | simplest form |
| GCF (greatest common factor) | |
| LCD (least common denominator) | |
| LCM (least common multiple) | |

| Monday | Tuesday | Wednesday | Thursday | Friday |
|----------------------|---------|-----------|----------|--------|
| 2 | 3 | 4 | 5 | 6 |
| 9 Columbus Day | 10 | 11 | 12 | 13 |
| 16 | 17 | 18 | 19 | 20 |
| 23 | 24 | 25 | 26 | 27 |
| 30 | 31 | | | |

Assessment Schedule by Chapter

Quick -- Diagnosing Readiness - Beg of Chap.
 Pre-Test -Assessment Manual
 Quiz - MCAS Section A Quiz - MCAS Manual
 Quiz - MCAS Section B. Quiz - MCAS Manual
 Quiz - MCAS Section C Quiz - MCAS Manual
 End of Chap. Test for Practice - Text
 Test - Chap. Test A or B - Assessment Manual
 Test - Cumulative Review & Test Prep. - Text

Agawam Public Schools Grade 6 November 2006

Chapter 4

Grade 6

Standards

6.N.9 Selects and use appropriate operations to solve problems involving addition, subtraction, multiplication, division and positive integer exponents with whole numbers and with positive fractions, mixed numbers, decimals and percents.

6.N.14 Accurately and efficiently add, subtract, multiply and divide positive fractions and mixed numbers. Simplify fractions.

6.N.16 Estimate results of computations with whole numbers and with positive fractions, mixed numbers, decimals and percents. Describe reasonableness of estimates.

Vocabulary

benchmark
elapsed time

| Monday | Tuesday | Wednesday | Thursday | Friday |
|--------|-----------------------|----------------|--------------------|------------------------|
| | | 1 | 2 | 3 |
| 6 | 7 Pro. Dev. Day | 8 | 9 | 10 Veterans' Day |
| 13 | 14 | 15 | 16 | 17 |
| 20 | 21 | 22 Half-Day | 23 Thanksgiving | 24 Thanksgiving |
| 27 | 28 | 29 | 30 | |

Assessment Schedule by Chapter

Quick -- Diagnosing Readiness - Beg of Chap.
Pre-Test -Assessment Manual
Quiz - MCAS Section A Quiz - MCAS Manual
Quiz - MCAS Section B. Quiz - MCAS Manual
Quiz - MCAS Section C Quiz - MCAS Manual
End of Chap. Test for Practice - Text
Test - Chap. Test A or B - Assessment Manual
Test - Cumulative Review & Test Prep. - Text

Agawam Public Schools Grade 6 December 2006

Chapter 5 **Grade 6** **Standards**

6.N.9 Selects and use appropriate operations to solve problems involving addition, subtraction, multiplication, division and positive integer exponents with whole numbers and with positive fractions, mixed numbers, decimals and percents.

6.N.14 Accurately and efficiently add, subtract, multiply and divide positive fractions and mixed numbers. Simplify fractions.

6.N.16 Estimate results of computations with whole numbers and with positive fractions, mixed numbers, decimals and percents. Describe reasonableness of estimates.

6.P.3 Use the properties of equality to solve problems, e.g., if $\square + 7 = 13$, then $\square = 13 - 7$, therefore $\square = 6$; if $3 \times \square = 15$, then $1/3 \times 3 \times \square = 1/3 \times 15$, therefore $\square = 5$.

6.M.3 Solve problems involving proportional relationships and units of measurement, e.g., same system unit conversions, scale models, maps and speed.

Vocabulary

reciprocal

| Monday | Tuesday | Wednesday | Thursday | Friday |
|--------------------------|--------------------------|-------------------------------|--------------------------|--------------------------|
| | | | | 1 |
| 4 | 5 | 6 Half-Day Parent Conf. | 7 | 8 |
| 11 | 12 | 13 | 14 | 15 |
| 18 | 19 | 20 | 21 | 22 |
| 25 Winter Vacation | 26 Winter Vacation | 27 Winter Vacation | 28 Winter Vacation | 29 Winter Vacation |

| <u>Assessment Schedule by Chapter</u> |
|---|
| Quick -- Diagnosing Readiness - Beg of Chap. Pre-Test -Assessment Manual |
| Quiz - MCAS Section A Quiz - MCAS Manual |
| Quiz - MCAS Section B. Quiz - MCAS Manual |
| Quiz - MCAS Section C Quiz - MCAS Manual |
| End of Chap. Test for Practice - Text |
| Test - Chap. Test A or B - Assessment Manual |
| Test - Cumulative Review & Test Prep. - Text |

Agawam Public Schools Grade 6 January 2007

Chapter 6 & 7

Grade 6

Standards

Chapter 6

- 6.N.4 Demonstrate an understanding of fractions as a ratio of whole numbers, as parts of unit wholes, as parts of a collection and as locations on the number line.
- 6.N.5 Identify and determine common equivalent fractions, mixed numbers, decimals and percents.
- 6.N.9 Selects and use appropriate operations to solve problems involving addition, subtraction, multiplication, division and positive integer exponents with whole numbers and with positive fractions, mixed numbers, decimals and percents.
- 6.P.4 Represent real situations and mathematical relationships with concrete models, tables, graphs and rules in words and with symbols, e.g., input/output tables.
- 6.M.3 Solve problems involving proportional relationships and units of measurement, e.g., same system unit conversions, scale models, maps and speed.

Chapter 7

- 6.D.1 Describe and compare data sets using the concepts of median, mean, mode, maximum and minimum and range.
- 6.D.2 Construct and interpret stem-and-leaf plots, line plots and circle graphs.

| Monday | Tuesday | Wednesday | Thursday | Friday |
|-------------------------|---------|-----------|----------|--------|
| 1 Winter Vacation | 2 | 3 | 4 | 5 |
| 8 | 9 | 10 | 11 | 12 |
| 15 Holiday | 16 | 17 | 18 | 19 |
| 22 | 23 | 24 | 25 | 26 |
| 29 | 30 | 31 | | |

Vocabulary Chapter 6

| | |
|----------------|------------|
| cross products | ratio |
| equal ratios | scale |
| percent | unit price |
| proportion | unit rate |
| rate | |

Vocabulary Chapter 7

| | | |
|-----------------|------------|--------------------|
| bar graph | line graph | outlier |
| cell | line plot | range |
| circle graph | mean | spreadsheet |
| frequency table | median | stem-and-leaf plot |
| histogram | mode | |

Assessment Schedule by Chapter

Quick -- Diagnosing Readiness - Beg of Chap.
 Pre-Test -Assessment Manual
 Quiz - MCAS Section A Quiz - MCAS Manual
 Quiz - MCAS Section B. Quiz - MCAS Manual
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Agawam Public Schools Grade 6 February 2007

Chapter 8

Grade 6

Standards

6.P.4 Represent real situations and mathematical relationships with concrete models, tables, graphs and rules in words and with symbols, e.g., input/output tables.

6.G.1 identify polygons base on their properties, including types of interior angles, perpendicular or parallel sides and congruence of sides, e.g., squares, rectangles, rhombuses, parallelograms, trapezoids and isosceles, equilateral and right triangles.

6.G.3 Identify relationships among points, lines and planes, e.g., intersecting, parallel, perpendicular.

6.G.6 Predict, describe and perform transformations on two-dimensional shapes, e.g., translations, rotations and reflections.

6.G.7 Identify types of symmetry, including line and rotational.

6.G.8 Determine if two shapes are congruent by measuring sides or a combination of sides and angles, as necessary; or by motions or series of motions, e.g., translations, rotations and reflections.

6.M.2 Identify, measure, describe, classify and construct various angles, triangles and quadrilaterals.

6.M.7 Find the sum of the angles in simple polygons (up to eight sides) with and without measuring the angles.

Vocabulary

angle
collinear
congruent angles
line
line symmetry

parallel lines
point
polygon
quadrilateral
ray

reflection
rotation
segment
similar figures
translation

| Monday | Tuesday | Wednesday | Thursday | Friday |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | | | 1 | 2 |
| 5 | 6 | 7 | 8 | 9 |
| 12 | 13 | 14 | 15 | 16 |
| 19 Winter Vacation | 20 Winter Vacation | 21 Winter Vacation | 22 Winter Vacation | 23 Winter Vacation |
| 26 | 27 | 28 | | |

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Agawam Public Schools Grade 6 March 2007

Chapters 9 and 10

Grade 6

Standards

Chapter 9

6.N.9 Selects and use appropriate operations to solve problems involving addition, subtraction, multiplication, division and positive integer exponents with whole numbers and with positive fractions, mixed numbers, decimals and percents.

6.N.12 Demonstrate an understanding of the inverse relationship of addition and subtraction and use that understanding to simplify computations and solve problems.

6.G.2 Identify three-dimensional shapes (e.g., cubes, prisms, spheres, cones and pyramids) based on their properties, such as edges and faces.

6.G.9 Match three-dimensional objects and their two-dimensional representations, e.g., nets, projections and perspective drawings.

6.M.1 Apply the concepts of perimeter and area to the solution of problems. Apply formulas where appropriate.

6.M.4 Find area of triangles and parallelograms. Recognize that shapes with the same number of sides but different appearances can have the same area. Develop strategies to find the area of more complex shapes.

6.M.5 Identify, measure and describe circles and the relationships of the radius, diameter, circumference and area and use the concepts to solve problems.

6.M.6 Find volumes and surface areas of rectangular prisms.

Chapter 10

6.N.10 Use the number line to model addition and subtraction of integers, with the exception of subtracting negative integers.

6.N.15 Add and subtract integers, with the exception of subtracting negative integers.

6.P.5 Solve linear equations using concrete models, tables, graphs and paper-pencil methods.

6.P.6 Produce and interpret graphs that represent the relationship between two variables in everyday situations.

6.G.4 Graph points and identify coordinates of points on the Cartesian coordinate plant (all four quadrants).

Vocabulary Chapter 9

area
chord
circle
circumference
diameter
metric system

perimeter
prism
radius
surface area
volume

Vocabulary Chapter 10

absolute value
coordinate plane
function
integers

opposites
ordered pair
origin
quadrants

| Monday | Tuesday | Wednesday | Thursday | Friday |
|--------|---------|------------------------------|----------|--------|
| | | | 1 | 2 |
| 5 | 6 | 7 Half Day Parent Conf | 8 | 9 |
| 12 | 13 | 14 | 15 | 16 |
| 19 | 20 | 21 | 22 | 23 |
| 26 | 27 | 28 | 29 | 30 |

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Agawam Public Schools Grade 6 April 2007

Chapter 11

Grade 6

Standards

6.D.3 Use tree diagrams and other models (e.g., lists and tables) to represent possible or actual outcomes of trials. Analyze the outcomes.

6.D.4 Predict the probability of outcomes of simple experiments (e.g., tossing a coin, rolling a die) and test the predictions. Use appropriate ratios between 0 and 1 to represent the probability of the outcome and associate the probability with the likelihood of the event.

Vocabulary

| | |
|--------------------------|-------------------------|
| Compound events | permutations |
| Counting principle | population |
| Equally likely outcomes | probability of an event |
| Event | sample |
| Experimental probability | simulation |
| Independent events | tree diagram |

| Monday | Tuesday | Wednesday | Thursday | Friday |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 2 | 3 | 4 | 5 | 6 Holiday |
| 9 | 10 | 11 | 12 | 13 |
| 16 Spring Vacation | 17 Spring Vacation | 18 Spring Vacation | 19 Spring Vacation | 20 Spring Vacation |
| 23 | 24 | 25 | 26 | 27 |
| 30 | | | | |

| <u>Assessment Schedule by Chapter</u> |
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Agawam Public Schools Grade 6 May 2007

Chapter

Grade 6

Standards

| Monday | Tuesday | Wednesday | Thursday | Friday |
|----------------------|---------|-----------|----------|--------|
| | 1 | 2 | 3 | 4 |
| 7 | 8 | 9 | 10 | 11 |
| 14 MCAS | 15 | 16 | 17 | 18 |
| 21 | 22 | 23 | 24 | 25 |
| 28 Holiday | 29 | 30 | 31 | |

Assessment Schedule by Chapter

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Agawam Public Schools Grade 6 June 2007

Chapter

Grade 6

Standards

| Monday | Tuesday | Wednesday | Thursday | Friday |
|-------------------------|---------|-----------|----------|--------|
| | | | | 1 |
| 4 | 5 | 6 | 7 | 8 |
| 11 | 12 | 13 | 14 | 15 |
| 18 Last Day | 19 | 20 | 21 | 22 |
| 25 Last Day/ Snow | 26 | 27 | 28 | 29 |

| <u>Assessment Schedule by Chapter</u> |
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