Brookwood School District 167 **Brookwood Junior High School: 2014-2015 Pacing Guide**

Grade: 7 **Subject Area: Mathematics** **Quarter: 1st**

Dates	Alignment	Content and Skills	Resources	Assessments	Vocabulary	Big Idea
Time allotted	*Common Core Standard*	*Objectives/Strategies/Literacy*	*Texts, Supplements, Technology*	*Type/Date*	*Content/Assessment*	*Essential Questions*
4-5 weeks	**Unit 1: Ratios & Proportionality** 7RP.1 7RP.2 Supporting Standards: 7NS.1 7NS.2 7NS.2 7EE.2	Students will be able to analyze proportional relationships and use them to solve real world and mathematical problems. Students will be able to recognize and represent proportional relationships between quantities.	**Text** Prentice Hall Mathematics Prentice Hall Algebra **ISBE** ISBE Math Model Units PARCC Samples/Activities **Technology** Student Response Systems Smartboard Calculators (when appropriate) Rulers	Pre Test Part A: 8/21 Pre Test Part B: 8/22 Formative Assessments/Quizzes: 8/29 9/12 9/19 9/26 ISBE Model Math Unit 1 Assessments	Simple interest Percent of increase Percent of decrease Commission Percent of error Rate of change Gratuity Tax Tip Ratio Rate Proportion Percent Unit rate Equivalency Greatest common factor Least common factor	When and why do I use proportional comparisons? How can proportional relationships solve real world problems or assist in decision-making? How can understanding ratios help make a more educated consumer? How do graphs illustrate proportional relationships?
2-3 weeks	**Unit 2: Ratio & Proportion Applications** 7 RP.3 7G.1 Supporting Standards: 7 NS.2 7NS.3 7EE.2 7EE.3	Students extend their understanding of ratios and develop understanding of proportionality to solve single and multi -step problems involving such real world contexts as percent of increase or decrease and scale drawing. Students will solve problems involving scale drawing of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing in a different scale.	**Text** Prentice Hall Mathematics Prentice Hall Algebra **ISBE** ISBE Math Model Units PARCC Samples/Activities **Technology** Student Response Systems Smartboard Calculators (when appropriate) Rulers	Pre Test for unit: 10/3 Formative Assessments/Quizzes 10/10 10/17 Post Quarterly Assessment: 10/23 10/24 ISBE Model Math Unit 2 Assessments	Ratio Proportion Percent increase Percent decrease Percent error Markdowns Markups Scale Area Volume Simple interest Equivalent	How can I use proportional relationships to solve ratio and percent problems? How can I use scale drawings to compute actual lengths and area? How can I use geometric figures to reproduce a drawing at a different scale?

Grade: 8 **Subject Area: Mathematics** **Quarter: 1st**

Dates	**Alignment**	**Content and Skills**	**Resources**	**Assessments**	**Vocabulary**	**Big Idea**
Time allotted	*Common Core Standard*	*Objectives/Strategies/Literacy*	*Texts, Supplements, Technology*	*Type/Date*	*Content/Assessment*	*Essential Questions*
2 weeks 2 weeks 2 weeks	**Real Numbers & Exponents** 8NS.1 8NS.2 8 EE.1 8EE.2 8EE.3 8EE.4	Students will deepen their understanding of the meaning of rational and irrational numbers; and turn decimal expansions into fractions Students will learn that the square roots of perfect squares are rational numbers and that the square roots of non-perfect squares, such as or are examples of irrational numbers. Students will understand the value of square roots and cube roots and use this understanding to solve equations involving perfect squares and cubes. Further work with exponents, including scientific notation, naturally flow from the understanding of squares and cubes.	**Text** Prentice Hall Mathematics Prentice Hall Algebra **ISBE** ISBE Math Model Unit #1 PARCC Samples/Activities **Technology** Student Response Systems Smartboard Calculators (when appropriate)	Pre Test Part A: 8/21 Pre Test Part B: 8/22 Formative Assessments/Quizzes: 8/29 9/12 9/19 9/26 10/3 ISBE Model Math Unit 1 – 8th Grade Assessments	Exponent Scientific notation Radical Irrational number Rational number Square root Cube root Perfect cube Perfect square Repetend Equation Expression Variable Property Unknown Solution Integer Inverse operations	Why are quantities represented in multiple ways? How is the universal nature of properties applied to real numbers?
3 weeks	Expressions and Equations 8EE.7	Students will build on their knowledge of solving equations to realize that there may be a single solution, infinite solutions, or no solutions. Students will be able to identify patterns in successive simplification of equations. Students will be able to understand the reasoning behind a solution or solution method as well as the actual procedure for solving equations. For example, when solving the equation , students could reason by inspection noting that a number plus sixteen will never equal that same number plus fourteen. In this case the solution method would not be procedural but conceptual justification.	**Text** Prentice Hall Mathematics Prentice Hall Algebra **ISBE** ISBE Math Model Units PARCC Samples/Activities **Technology** Student Response Systems Smartboard Graphing Calculators (when appropriate)	Pre Test for unit: 10/6 Formative Assessments/Quizzes 10/10 10/17 Post Quarterly Assessment: 10/23 10/24 ISBE Model Math Unit 2 – 8th Grade Assessments	Simplify Distributive property Like terms Solution Inverse operations Expand Factor Variable Unknown	How do we express a relationship mathematically? How do we determine the value of an unknown quantity?

2014-2015 Pacing Quadrant/Testing Schedule

Brookwood Junior High School

Mathematics Grade: 7

1st Quarter

Unit 1: Ratios & Proportionality
7.RP.1
7.RP.2
(Supporting Standards 7.NS.1, 7.NS.2, 7.NS.3, 7.EE.2)
4-5 Weeks

Unit 2: Ratio & Proportion Applications
7.RP.3
7.G.1
(Supporting Standards 7.NS.2, 7.NS.3,7.EE.2, 7.EE.3)
2-3 Weeks

2nd Quarter

Unit 3: Rational Number Operations
7.NS.1
7.NS.2
7.NS.3
(Supporting Standards 7.EE.2)
6 Weeks

Unit 4: Expressions
7.EE.1
7.EE.2
(Supporting Standards 7.NS.1, 7.NS.2)
3 Weeks

3rd Quarter

Unit 5: Equations
7.EE.3
7.EE.4
7.G.4
(Supporting Standards 7.NS.1, 7.NS.2)
5 Weeks

Unit 6: Data Distributions
7.SP.1
7.SP.2
7.SP.3
7.SP.4
(Supporting Standards 7.NS.1, 7.NS.2, 7.NS.3, ,7.EE.2, 7.EE.3)
4 Weeks

4th Quarter

Unit 7: Probability
7.SP.5
7.SP.6
7.SP.7
7.SP.8
(Supporting Standards 7.NS.1, 7.NS.2, 7.NS.3, ,7.EE.2, 7.EE.3)
3 Weeks

Unit 8: Geometric Measurement
7.G.2
7.G.3
7.G.5
7.G.6
(Supporting Standards 7.EE.2, 7.EE.3, 7.EE.4)
5 Weeks

2014-2015 Pacing Quadrant/Testing Schedule

Brookwood Junior High School

Mathematics Grade: 8

1st Quarter

Unit 1: Real Numbers and Exponents
8NS.1
8NS.2 2 Weeks

8 EE.1
8EE.2 2 Weeks

8EE.3
8EE.4 2 Weeks

Unit 2: Expressions/Equations
8EE.7 3 Weeks

2nd Quarter

Unit 3: Congruence/Similarity
8.G.2 2 Weeks
8.G.4, 8.G.5 2 Weeks
8.G.1, 8.G.3 2 Weeks
(Supporting Standards 8.F.1, 8.F.3)

Unit 4 (Part A): Functions
8.EE.5, 8.EE.6 2 Weeks
8.F.1 1 Week

3rd Quarter

Unit 4 (Part B): Functions
8.F.2
8.F.3
8.F.4 (Supporting Standards 8.EE.7, 8.SP.1, 8.SP.2, 8.SP.3)
4 Weeks

8.F.5 2 Weeks

Unit 5 (Part A) Linear Systems
8.EE.8
(Supporting Standard
8.EE.7)
3 Weeks

4th Quarter

Unit 5 (Part B): Linear Systems
8.EE.8
(Supporting Standard
8.EE.7)
1 Week

Unit 6: Pythagorean Theorem
8.G.6
8.G.7
8.G.8
(Supporting Standards 8.NS.1, 8.NS.2)
2 Weeks

Unit 7: Volume
8.G.9
(Supporting Standards 8.EE.1, 8.EE.2, 8.NS.2)
3 Weeks

Unit 8: Patterns/Bivariate Data
8.SP.1, 8.SP.2, 8.SP.3, 8.SP.4
4 Weeks