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| FARMINGDALE UNION FREE SCHOOL DISTRICT | | | | | | | |
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| Dr. Gerardine M. Johnson-Carpenter | | | | | | | |
| Director of Mathematics | | | | | | | |
| September 2009 | | | | | | | |
| | | | | | | | |
| GRADE 6 MATHEMATICS SCOPE AND SEQUENCE | | | | | | | |
| | | | | | | | |
| TEXTBOOKS: Applications and Concepts Course 2 | | | | | | | |
| Glencoe 2006 | | | | | | | |
| WORKBOOK: Measuring Up Second Edition Level F 2006 | | | | | | | |
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| Lesson # | Date | Unit | Aim/Objective | Indicator | Glencoe Text | Measuring Up | Optional Resources |
| | | | | | | | |
| | | | Unit 1: Decimals, Algebra and Statistics Chapter 1: Decimal Patterns and Algebra | | | | |
| | | 1-1 | What is the 4 step plan for problem solving? | 6PS3 | 6-9 | | |
| | | 1-2 | How do we evaluate powers and exponents? | 6N23, 6N24, 6N25 | 10-13 | | |
| | | 1-3 | What is the order of operations? | 6N22, 6N25 | 14-17 | | |
| | | 1-4 | How do we evaluate algebraic expressions using the Order of Operations? | 6A2 | 18-21 | | |

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| | | 1-5A | How do we use the problem solving strategies of trial and error and elimination to solve problems? | 6PS12 | 22-23 | | |
| | | 1-5 | How do we evaluate simple one step equations using basic whole number facts? | 5A4 | 24-28 | | |
| | | 1-6 | Identify and define the following : commutative, associative, distributive, identity and inverse? | 6N1, 6N3, 6N4, 6N2 | 30-34 | | |
| | | 1-7 | What are sequences? | 6PS14 | 34-36 | | |
| | | 1-8 | How do we convert within the metric system? | 6M4, 6M5 | 38-41 | | |
| | | | Review | | 46-51 | | |
| | | | Test | | | | |
| | | | Unit 1: Decimals, Algebra and Statistics | | | | |
| | | | Chapter 2: Statistics and Analyzing Data | | | | |
| | | 2-2a | How do we read and interpret graphs? | 6.S.7 | 58-59 | 162-163 | |
| | | 2-2 | How do we use data to make predictions? | 6.S.8 | 60-63 | 164-165 | |
| | | 2-3 | How do we read, interpret and construct line plots? | 6.S.7 | 64-68 | | |
| | | 2-4 | How do we determine the mean, mode and median of a given set of data? | 6.S.5 | 69-72 | 160-161 | |

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| | | 2-6 | How do we determine the range for a given set of data? | 6.S.6 | 80-83 | | |
| | | | Review | | 96-98 | | |
| | | | Test | | | | |
| | | | Unit 2: Integers and Algebra | | | | |
| | | | Chapter 3: Algebra: Integers | | | | |
| | | 3-1 | How do we determine absolute values of rational numbers? | 6.N.13 | 106-108 | 22-23 | |
| | | 3-2 | How do we locate and order numbers on a number line? | 6.N.14 6.N.15 | 109-111 | 24-25 | |
| ***** | | 3-3 | What are ordered pairs of numbers on the coordinate plane? | 6G10 | 112-115 | | |
| ***** | | 3-3 | How do we plot points on a coordinate plane in all four quadrants? | 6G10 | 112-115 | | |
| ***** | | 3-3 | Practice plotting points on a coordinate plane. | 6G10 | 112-115 | | |
| OPTIONAL | | 3-4 | How do we add integers with or without the use of a number line? | 7.N.13 | 120-124 | | *prerequisite for 4-2 |
| OPTIONAL | | 3-5 | How do we subtract integers with or without the use of a number line? | 7.N.13 | 128-131 | | |

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| OPTIONAL | | 3-6 | How do we multiply integers? | 7.N.12 | 134-137 | | |
| | | 3-7 | How do we divide integers? | 7.N.12 | 138-141 | | |
| | | | Review | | 142-144 | | |
| | | | Test | | | | |
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| | | | | | | | |
| | | | Unit 2: Integers and Algebra | | | | |
| | | | Chapter 4: Linear Equations and Functions | | | | |
| | | 4-1 | How do we translate verbal expressions into algebraic expressions? | 6.A.1 | 150-152 | 64-65 | |
| | | 4-2 | How do we solve one step equations using inverse operations? | 5.A.5 | 156-159 | | |
| | | 4-3 | How do we solve one step equations using inverse operations? | 5.A.5 | 160-163 | | |

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| ***** | | 4-4 | How do we translate two step verbal sentences into algebraic equations? | 6.A.3 | 166-169 | | |
| ***** | | 4-4 | How do we solve two step equations? | 6.A.4 | 166-169 | | |
| ***** | | 4-4 | Practice solving two step equations | 6.A.4 | 166-169 | | |
| | | 4-5 | How do we solve one step inequalities? | 7.A.5 | 172-175 | | |
| | | 4-6 | How do we draw the graphic representation of a pattern from an equation? | 7.A.7 | 177-181 | | |
| | | | Review | | 186-188 | | |
| | | | Test | | | | |
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| | | | Unit 3: Fractions | | | | |
| | | | Chapter 5: Fractions, Decimals and Percents | | | | |
| | | 5-3 | How do we simplify fractions to lowest terms? | 5.N.19 | 207-209 | | |
| | | 5-4 | How do we represent fractions as terminating or repeating decimals? | 6.N.20 | 210-211 | 34-35 | |
| | | 5-5 | How do we find multiple representations of rational numbers, fractions and percents? | 6.N.21 | 216-219 | 36-37 | |
| | | 5-6 | How do we find multiple representations of rational numbers, fractions and percents? | 6.N.21 | 220-223 | 36-37 | |

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| | | 5-7 | How do we calculate multiples of whole numbers and Least Common Multiples? | 5.N.13 | 224-226 | | |
| | | 5-8 | How do we order rational numbers? | 6.N.15 | 227-230 | 24-25 | |
| | | | Review | | 232-235 | | |
| | | | Test | | | | |
| | | | Unit 3: Fractions | | | | |
| | | | Chapter 6: Applying Fractions | | | | |
| | | 6-1 | How do we justify the reasonableness of answers using estimation? | 6.N.27 | 200-243 | 46-47 | |
| | | 6-2 | How do we add and subtract fractions with unlike denominators? | 6.N.16 | 244-247 | 26-27 | |
| | | 6-3 | How do we add and subtract mixed numbers with unlike denominators? | 6.N.16 | 248-251 | 26-27 | |
| | | 6-4 | How do we <i>multiply</i> fractions and mixed numbers? | 6.N.17 6.N.18 | 254-255 | 28-29 30-31 | |
| | | 6-5 | How do we identify the multiplicative inverse (reciprocal) of a number | 6.N.19 | 258-259 | 32-33 | |
| | | 6-6 | How do we <i>divide</i> fractions and mixed numbers? | 6.N.17 6.N.18 | 264-266 | | |
| | | 6-7 | How do we identify customary units of capacity? | 6.M.2 6.M.3 6.M.9 | 267-269 | 128-129* 136-137 | *metric included |

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| | | 6-8 | How do we evaluate formulas for area and perimeter of quadrilaterals? (squares/rectangles) | 6.A.6 6.G.2 | 270-273 | 74-75* | *Triangles included |
| | | 6-9 | How do we identify and understand the relationship of diameter and radius of a circle? | 6.G.5 6.G.6 | 275-277 | 98-99 100-101 | |
| | | 6-9 | How do we determine the circumference of a circle using the appropriate formula? | 6.G.7 | 275-277 | 102-103* | *area included |
| | | 6-9 | How do we find the area of a circle? | | | | |
| | | | Review | | 278-281 | | |
| | | | Test | | | | |
| | | | Unit 4: Proportional Reasoning Chapter 7: Ratios: Proportions | | | | |
| | | 7-1 | How do we express equivalent ratios as a proportions? | 6.N.7 | 288-289 | 12-13 | |
| | | 7-2 | How do we distinguish between rate and ratio? | 6.N.8 | 292-293 | 12-13 | |
| | | 7-3 | How do we solve proportions using equivalent fractions? | 6.N.9 | 297-298 | 14-15 | |
| ***** | | | How do we solve simple proportions? | 6.A.5 | 297-298 | | |
| | | 7-5 | How do we find multiple representations of rational numbers (fractions, decimals and percents)/ | 6.N.21 | 312-313 | 36-37 | |

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| | | 7-6 | How do we read, write and identify percents of a whole (0%-100%) | 6.N.11 | 316-318 | 18-19 | |
| | | 7-7 | How do we solve percent problems involving <i>percent</i> , rate and base? | 6.N.12 | 319-321 | 20-21 | |
| | | 7-8 | How do we solve percent problems involving percent, rate and <i>base</i> ? | 6.N.12 | 323-324 | 20-21 | |
| | | | Review | | 326-329 | | |
| | | | Test | | | | |
| | | | Unit 4: Proportional Reasoning | | | | |
| | | | Chapter 8: Applying Percents | | | | |
| | | 8-1 | How do we estimate a percent of quantity (0%-100%) | 6.N.26 | 334-336 | 44-45 | |
| | | 8-2 | How do we solve percent problems involving percent, rate and <i>base</i> ? | 6.N.12 | 340-343 | 20-21 | |
| | | 8-3 | How do we justify predictions made from data? | 6.S.8 | 345-347 | 164-165 | |
| | | | Review | | 362-365 | | |
| | | | Test | | | | |
| | | | Chapter 9: Probability | | | | |
| ***** | | 9-1 | What is probability? | 6.S.9 | 370-371 | | |
| ***** | | 9-2 | How do we draw tree diagrams? | | 374-377 | | |
| ***** | | 9-3 | What is the counting principal? | 6.S.11 | 378-380 | | |
| ***** | | 9-7 | What are compound events? | 6.S.9 | 398-401 | | |
| ***** | | 9-7 | What are independent and dependent events? | 6.S.20 | 398-401 | | |
| ***** | | | Review | | | | |

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| ***** | | | Test | | | | |
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| | | | Unit 5: Geometry and Measurement Chapter 10: Geometry | | | | |
| | | 10-2 | How do we calculate the area of the sector of a circle given the measure of the central angle and the radius? | 6.G.8 | 418-421 | 104-105 | |
| | | 10-4 | How do we classify triangles by properties of their angles and sides? | 5.G.6 | 428-431 | | |
| | | 10-5 | How do we classify quadrilaterals by properties of their angles and sides? | 5.G.4 | 434-437 | | |
| | | 10-6 | How do we calculate the lengths of sides of corresponding sides of similar triangles using proportional reasoning? | 6.G.1 | 440-443 | | |
| | | | | | | | |
| | | | Unit 5: Geometry and Measurement Chapter 11: Measuring two-dimensional figures | | | | |
| | | 11-1 | How do we evaluate expressions having exponents where the power is an exponent of 1, 2, 3? | 6.N.25 | 470-473 | 42-43 | |

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| | | 11-4 | How do we find the area of a parallelogram? | 6.A6, 6.G.2 | 483-485 | | |
| | | 11-5 | How do we find the areas of triangles and trapezoids? | 6.A6, 6.G.2 | 489-492 | 92-93 | |
| ***** | | | How do we calculate the area of polygons drawn on a coordinate plane? | 6G11 | | | |
| | | 11-6 | How do we determine the area/circumference of a circle using the appropriate formula? | 6.A.6, 6.G.7 | 493-495 | 102-103 | |
| | | | Practice finding the area and circumference of a circle | 6.G.7 | | | |
| | | 11-7 | How do we find the areas of regular and irregular polygons? | 6.G.3 | 498-500 | 94-95 | |
| | | 11-8 | How do we find the probability of an event using an area model? | 6.G.3 | 501-503 | | |
| | | | Review | | 504-506 | | |
| | | | Test | | | | |
| | | | Unit 5: Geometry and Measurement Chapter 12: Measuring three-dimensional figures | | | | |
| | | 12-1 | How do we use nets to create three-dimensional figures? (prisms, cylinders, and cones) | 7.G.3 | 514-517 | | |
| | | 12-2 | How do we find the volume of rectangular prisms? | 6.G.4, 6.M.1 | 520-522 | 126-127 | |

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| | | 12-3 | How do we calculate the volume of a cylinder? | 6.A.6, 6.G.7 | 524-527 | | |
| | | 12-4 | How do we determine the surface area of rectangular prisms? | 7.G.4. | 532-535 | | |
| | | 12-5 | How do we determine the surface area of cylinders? | 7.G.4. | 538-541 | | |
| | | | Review | | 546-548 | | |
| | | | Test | | | | |
| MAY-JUNE | | | Statistics and Data | | | | |
| ***** | | | What is sampling and how do we collect data? | 6.S.1 | | | |
| ***** | | | How do we record data in a frequency table? | 6.S.2 | 54-57 | | |
| ***** | | | How can we use Venn diagrams to sort data? | 6.S.3 | | | |
| ***** | | | Given a set of data, draw the most appropriate graph given a set of data: pictograph, bar graph, line graph, histogram or circle graph. | 6.S.4 | | | |
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| Revised: 9/09 | | | | | | | |