BLACKHAWK SCHOOL DISTRICT

# Course Title: Math 7/8 Developmental

**Grade Level(s):** 7/8

**Length of Course:** One Year

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**Daily analog clock problem and/or money problem**

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| **Unit Breakdown** | **Objectives** | **Common Core Standards** | **PSSA Standards** |
| Number Theory | * Calculate problems using integer rules using numbers lines and number charts-maximum 3 weeks no calculators * Apply the order of operations using integers and rational numbers-calculators permitted * Use integer rules to solve real life problems –calculators permitted * Use rational number rules to solve real life problems- calculators permitted * Compare and order integers * Compare and order rational numbers. * Convert rational numbers into different forms using a calculator | * CC.2.1.7.E.1 | * M07.A-N.1.1.1 * M07.A-N.1.1.2 * M07.A-N.1.1.3 |
| Expressions, Equations, and Inequalities | * Apply properties to evaluate and simplify expressions-(combine like terms and substitute values for variables) * Use the distributive property to write equivalent expressions. * Identify GCF and LCM * Factor GCF from algebraic expressions * Solve multi-step linear equations with integer coefficients * Solve multi-step inequalities with integer coefficients and graph them * Solve real world and word problems using linear equations and inequalities | * CC.2.2.7.B.1 * CC.2.2.7.B.3 | * M07.B-E.1.1.1 * M07.B-E.2.2.1 * M07.B-E.2.2.2 |
| Ratio, proportion, and percent | * Review simplifying fractions * Express ratios in different forms-be sure to simplify * Describe rates as unit rates * Real life applications of unit rates i.e. Which is the better buy? * Using proportions to solve algebraic and real world problems * Apply percent equations and proportions to real world problems such as discount, interest, tax, tip, etc. | * CC.2.1.7.D.1 * CC.2.2.7.B.3 | * M07.A-R.1.1.1 * M07.A-R.1.1.6 * M07.B-E.2.1.1 |
| Geometry | * Locate points and quadrants on the coordinate plane * Use a chart to find solutions to linear equations and graph the line * Use area and perimeter formulas for triangles and quadrilaterals to solve real world problems * Use area and circumference formulas to solve real world problems | * CC.2.3.7.A.1 * CC.2.2.7.B.3 * CC.2.2.8.B.2 | * M07.C-G2.2.1 * M07.C-G.2.2.2 |
| Statistics | * Calculate probabilities of simple events. * Compare measures of central tendency | * CC.2.4.7.B.3 | * M07.D-S.3.2.2. * M07.D-S.3.1.1. |

Year 2 Curriculum

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| Number Theory | * Calculate problems using integer rules using numbers lines and number charts-maximum 3 weeks no calculators * Apply the order of operations using integers and rational numbers-calculators permitted * Use rational number rules to solve real life problems –calculators permitted * Compare and order rational numbers. * Convert rational numbers into different forms using a calculator * Evaluate exponents and find square roots of perfect squares * Write numbers in scientific notation and standard form | * CC.2.1.7.E.1 * CC.2.2.8.B.1 | * M07.A-N.1.1.1 * M07.A-N.1.1.2 * M07.A-N.1.1.3 * M08.B-E.1.1.2 * M08.B-E.1.1.3 |
| Expressions, Equations, and Inequalities | * Apply properties to evaluate and simplify expressions-(combine like terms and substitute values for variables) * Use the distributive property to write equivalent expressions. * Identify GCF and LCM * Factor GCF from algebraic expressions * Solve multi-step linear equations with integer coefficients * Solve multi-step inequalities with integer coefficients and graph them * Solve real world and word problems using linear equations and inequalities * Use multiplication and division rule for exponents to simplify expressions | * CC.2.2.7.B.1 * CC.2.2.8.B.1 * CC.2.2.7.B.3 | * M07.B-E.1.1.1 * M07.B-E.2.2.1 * M07.B-E.2.2.2 * M08.B-E.1.1.1 |
| Ratio, proportion, and percent | * Review simplifying fractions * Express ratios in different forms-be sure to simplify * Describe rates as unit rates * Real life applications of unit rates i.e. Which is the better buy? * Using proportions to solve algebraic and real world problems * Apply percent equations and proportions to real world problems such as discount, interest, tax, tip, etc. | * CC.2.1.7.D.1 * CC.2.2.7.B.3 | * M07.A-R.1.1.1 * M07.A-R.1.1.6 * M07.B-E.2.1.1 |
| Geometry | * Locate points and quadrants on the coordinate plane * Use a chart to find solutions to linear equations and graph the line * Calculate the slope * Graph scatterplots and identify the relationship * Use area and perimeter formulas for triangles and quadrilaterals to solve real world problems * Determine the area of irregular polygons * Determine the area compound figures | * CC.2.3.7.A.1 * CC.2.2.7.B.3 * CC.2.2.8.B.2 | * M07.C-G2.2.1 * M07.C-G.2.2.2 * M08.B-E.2.1.1 * M08.B-E.2.1.2 |
| Statistics | * Calculate probabilities of simple events. * Compare measures of central tendency * Display data in various forms-line plots, stem-and-leaf, histogram, box-and-whisker, bar graph, circle graph, | * CC.2.4.7.B.3 | * M07.D-S.3.2.2. * M07.D-S.3.1.1. |

Use Math 7 textbook and number worlds level H, level I and level J (year 2)