# Centerville Jr. High School Curriculum Mapping
# Pre-Algebra
### 1st Nine Weeks
### Kristen Soots

| Unit/ Chapter/ Lesson | Indiana Standard(s) | Key Questions | Resources/Activities | Vocabulary | Assessments |
|---|---|---|---|---|---|
| 1.1.1 & 1.1.2 | | How do you write and evaluate an algebraic expression? | 1. Textbooks<br>2. Graphing Calculators<br>3. Laptops | Variable, coefficient, expression, constant, evaluate | 1. Homework<br>2. In Class Activities<br>3. Tests |
| 1.1.3 & 1.1.4 | AF.1 | How do you solve one step equations? | | Equation, solve, solution, inverse | |
| 1.1.5 | AF.1 | How do you solve and graph inequalities? | | Inequality, solution set | |
| 1.1.6 | AF.1 | How do you combine like terms in an algebraic expression? | | Term, like term, equivalent, simplify | |
| 1.1.7 | AF.3 | How do you write solutions as ordered pairs? | | Ordered pair | |
| 1.1.8 | AF.3 | How do you graph on a coordinate plane? | | Coordinate plane, x-axis, y-axis, x-coordinate, y-coordinate, origin | |
| 1.1.9 | AF.6 | How do you interpret graphs and/or tables to solve problems? | | | |
| 1.2.1 & 1.2.2 | | How do you add and subtract integers? | 1. Textbooks<br>2. Laptops | Integer, absolute value | 1. Homework<br>2. In Class Activities<br>3. Tests |
| 1.2.3 | | How do you multiply and divide integers? | | | |

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| 1.2.4 | AF.1 | How do you solve equations with integers? | | | |
| 1.2.5 | AF.1 | How do you solve inequalities with integers? | | | |
| 1.2.6 & 1.2.7 | NS.3 | How do you evaluate expressions with exponents? | | Power, exponent, base | |
| 1.2.8 | NS.3 | How do you evaluate negative exponents? | | | |
| 1.2.9 | C.2 | How do you express large and small numbers in scientific notation? | | Scientific notation | |
| PST: FA's Money-Making Scheme | NS.3 & C.2 | How do you apply properties of exponents and scientific notation to real-life scenarios? | 1. Textbooks<br>2. Laptops<br>3. PST Materials | Review unit vocabulary | Completed PST materials |

# Curriculum Mapping
# Pre-Algebra
## 2nd Nine Weeks

| Unit/ Chapter/ Lesson | Indiana Standard(s) | Key Questions | Resources/Activities | Vocabulary | Assessments |
|---|---|---|---|---|---|
| 2.3.1 | C.1 | How do you simplify rational numbers? | 1. Textbooks<br>2. Laptops | Rational number, relatively prime | 1. Homework<br>2. In Class Activities<br>3. Tests |
| 2.3.2 & 2.3.5 | C.1 | How do you add and subtract rational numbers? | | Least common denominator, reciprocal | |
| 2.3.3 & 2.3.4 | C.1 | How do you multiply and divide rational numbers? | | | |
| 2.3.6 | AF.1 | How do you solve equations with rational numbers? | | | |
| 2.3.7 | AF.2 | How do you solve inequalities with rational numbers? | | | |
| 2.3.8 | NS.4 | How do you find square roots? | | Square root, perfect square | |
| 2.3.9 | NS.4 | How do you solve problems with square roots? | | | |
| 2.3.10 | NS.1 & NS.2 | How do you determine if a number is rational or irrational? | | Irrational number, real number | |
| 2.10.1 | AF.1 | How do you solve two-step equations? | 1. Textbooks<br>2. Laptops | Additive inverse, multiplicative inverse, opposite | 1. Homework<br>2. In Class Activities<br>3. Tests |
| 2.10.2 | AF.1 | How do you solve multi-step equations? | | | |

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| 2.10.3 | AF.1 & AF.2 | How do you solve equations with variables on both sides? | | | |
| 2.10.4 | AF.1 | How do you solve and graph multi-step inequalities? | | | |
| 2.10.6 | AF.8 | How do you solve a system of equations? | | System of equations | |

# Curriculum Mapping

## Pre-Algebra

**3rd Nine Weeks**

| Unit/ Chapter/ Lesson | Indiana Standard(s) | Key Questions | Resources/Activities | Vocabulary | Assessments |
|---|---|---|---|---|---|
| 3.11.1 | AF.3 | How do you solve and graph a linear equation? | 1. Textbooks<br>2. Graphing Calculators<br>3. Laptops | Linear equation | 1. Homework<br>2. In Class Activities<br>3. Tests |
| 3.11.2 | AF.6 | What is slope and how do you find it? | | Slope | |
| 3.11.3 | AF.6 | How do you graph lines using slope and slope-intercept? | | X-intercept, y-intercept, slope-intercept form | |
| 3.11.4 | AF.6 | How do you find a linear equation given a point and slope? | | Point-slope form | |
| 3.11.7 | DSP.2 & DSP.3 | How do best-fit lines make predictions about data? | | Line of best fit | |
| 3.4.7 | DSP.1 & DSP.2 | How do you create and interpret scatter plots? | | Scatter plot, correlation, line of best fit | |
| 3.12.4 | AF.6 & AF.7 | How do you represent functions as tables, graphs, or equations? | | Function, input, output, domain, range | |
| 3.12.5 | AF.5 & AF.7 | How do you identify linear functions? | | Linear function | |
| 3.12.6 | AF.4 & AF.5 | How do you identify exponential functions? | | Exponential function | |
| 3.12.7 | AF.4 & AF.5 | How do you identify quadratic functions? | | Quadratic function, parabola | |

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| 3.6.1 & 3.6.2 | | How do you find perimeter and area of polygons? | 1. Textbooks<br>2. Laptops | Polygon, perimeter, area | 1. Homework<br>2. In Class Activities<br>3. Tests |
| 3.6.3 | GM.8 | How do you use the Pythagorean Theorem to solve problems? | | Pythagorean Theorem, hypotenuse, leg | |
| 3.6.4 | | How do you find area and circumference of circles? | | Radius, diameter, circumference | |
| 3.6.5 | GM.1 | How do you identify parts of a geometric solid? | | Face, edge, vertex | |
| 3.6.6 | | How do you find volume of prisms and cylinders? | | Prism, cylinder, volume | |
| 3.6.7 | GM.2 | How do you find volume of pyramids and cones? | | Pyramid, cone | |
| 3.6.8 | | How do you find surface area of prisms and cylinders? | | Surface area | |
| 3.6.9 | | How do you find surface area of pyramids and cones? | | Slant height | |
| 3.6.10 | GM.2 | How do you find volume and surface area of a sphere? | | Sphere, hemisphere, great circle | |

# Curriculum Mapping
# Pre-Algebra
## 4th Nine Weeks

| Unit/ Chapter/ Lesson | Indiana Standard(s) | Key Questions | Resources/Activities | Vocabulary | Assessments |
|---|---|---|---|---|---|
| 4.9.1 | DSP.4 | How do you find the probability of an event? | 1. Textbooks<br>2. Laptops | Experiment, outcome, sample space, event, probability | 1. Homework<br>2. In Class Activities<br>3. Tests |
| 4.9.2 & 4.9.4 | DSP.4 | How do you estimate probability using experiments or theories? | | Experimental probability, theoretical probability, mutually exclusive | |
| 4.9.5 | DSP.6 | How do you find the number of possible outcomes in an experiment? | | Fundamental Counting Principle, tree diagram | |
| 4.9.6 | | How do you find permutations and combinations? | | Factorial, permutation, combination | |
| 4.9.7 | DSP.5 | How do you find the probabilities of independent and dependent events? | | Independent event, dependent event | |
| 4.9.8 | | How do you find the odds of an event? | | Odds | |
| PST: Walk the Line | GM.7, GM.8 & GM.9 | How do you apply the Pythagorean Theorem to find distance between two points? | 1. Textbooks<br>2. Laptops<br>3. PST Materials | Pythagorean Theorem, Distance Formula | Completed PST materials |

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| LAB: Geometric Solids | GM.1 | What are the properties of geometric solids? | 1. Textbooks<br>2. Laptops<br>3. NCTM Illuminations website | Solid, net | Completed Lab materials |
| 4.7.1 | C.1 | How do you find equivalent ratios? | 1. Textbooks<br>2. Laptops | Ratio, proportion | 1. Homework<br>2. In Class Activities<br>3. Tests |
| 4.7.2 & 4.7.3 | C.1 | How do you use ratios and rates to solve problems? | | Rate, unit rate, unit price, conversion unit | |
| 4.7.4 | C.1 | How do you use ratios and proportions to solve story problems? | | Cross product | |
| 4.5.7 & 4.7.5 | GM.3, GM.4 & GM.6 | How do you complete transformations on a coordinate plane? | | Translation, rotation, reflection, dilation | |
| 4.7.6 | GM.5 | How do you determine if figures are similar? | | Similar | |
| 4.7.7 & 4.7.8 | C.1 | How do you use proportions to solve problems with scales? | | Scale, scale drawing, scale model | |
| 4.8.1 | NS.1 | How do you convert decimals, fractions and percents? | | Percent | |
| 4.8.2 & 4.8.3 | | How do you use proportions to solve problems with percents? | | | |
| LAB: Flip ’n Slide | GM.3, GM.4, GM.5 & GM.6 | What effects do reflections, translations, and rotations have on a geometric figure? | 1. Textbooks<br>2. Laptops<br>3. NCTM Illuminations website | Reflection, translation, rotation | Completed Lab materials |