5th GRADE MATHEMATICS

Cardinal Newman Standards: Catholic Identity Integration

- **CS.M.K6.GS1:** Demonstrate the mental habits of precise, determined, careful, and accurate questioning, inquiry, and reasoning.
  (CCSSI.M.5.OA.2; OA.3; NBT.2; NBT.6; NBT.7; NF.2; NF.3; NF.6; MD.2; MD.4; MD.5; G.1; G.2; G.4)
- **CS.M.K6.DS4:** Exhibit joy at solving difficult mathematical problems and operations.
  (CCSSI.M.5.OA.3; NBT.3; NBT.5; NBT.6; NBT.7; NF.1; NF.2; NF.4; NF.6; NF.7; MD.2; MD.4; MD.5; G.1; G.2)
- **CS.M.K6.DS5:** Show interest in how the mental processes evident within the discipline of mathematics help us with the development of the natural virtues.
  (CCSSI.M.5.OA.2; NBT.2; NBT.5; NBT.6; NF.2; NF.3; NF.5; MD.1; MD.3; G.1; G.2, G.3, G.4)

Priority Skills	Supporting Skills
• Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane • Illustrate and explain calculations by using equations, rectangular arrays, and/or area models. • Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators. • Solve real world problems involving multiplication of fractions and mixed numbers. • Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions. • Convert among different-sized standard measurement units within a given measurement system. • Use a pair of perpendicular number lines, called axes, to define a coordinate system. • Classify two-dimensional figures in a hierarchy based on properties • Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings.	• Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols. • Use whole-number exponents to denote powers of 10. • Use place value understanding to round decimals to any place. • Interpret a fraction as division of the numerator by the denominator. • Interpret multiplication as scaling (resizing). • Recognize volume as an attribute of solid figures and understand concepts of volume measurement. • Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.

Essential Questions
• How does graphing a data set help us understand that data more clearly and precisely? • What rules and formulas can we implement to conceptualize shapes and space in three-dimensions ? • What best practices can I implement in order to solve fraction and decimal problems and equations with fluency? • How can analyzing patterns and relationships in Mathematics offer us new insights into analyzing patterns and relationships in our everyday lives?
Vital Vocabulary
• Algorithm, Array, Axes/Axis, Bracket, Conversion, Coordinate, Corresponding, Cubic, Gram, Intersection, Liter, Meter, Ordered Pair, Origin, Parentheses, Rectangular Prism, Unit Cube, Volume

Additional Resources: Cardinal Newman Mathematics Resources, Appendix F