

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.A.1

Strand: Problem Solving

Diocesan Standard Terra Nova Objective	Benchmark Statement
Use a variety of strategies in the problem-solving process	Use reasoning abilities.

Performance Indicators		
<ol style="list-style-type: none"> 1. Perceive patterns. 2. Describe the properties and characteristics of patterns having two or more attributes. 3. Extend simple and geometric patterns. 4. Identify relationships between multiplication and division. 5. Formulate questions for further exploration. 6. Justify strategies. 		
Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.A.2

Strand: Problem Solving

Diocesan Standard Terra Nova Objective	Benchmark Statement
Use a variety of strategies in the problem solving process	Use a variety of problem solving strategies.

Performance Indicators
<ol style="list-style-type: none"> 1. Use guess and check, modeling, looking for patterns. 2. Use the 4-step problem solving process. 3. Solve 2-step problems.

Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.A.3

Strand: Problem Solving

Diocesan Standard Terra Nova Objective	Benchmark Statement
Use a variety of strategies in the problem-solving process	Communicate mathematical ideas in a variety of ways.

Performance Indicators		
1. Use words, numbers/symbols, pictures, charts/graphs/tables, diagrams and models in a variety of ways.		
Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.A.4

Strand: Problem Solving

Diocesan Standard Terra Nova Objective	Benchmark Statement
Use a variety of strategies in the problem-solving process	Connect mathematical learning with other subjects, personal experiences, current events and personal interest.

Performance Indicators
<ol style="list-style-type: none"> 1. See relationship between various kinds of problems and actual events. 2. Relate actual time to daily activities. 3. Use mathematics as a way to understand other curriculum areas.

Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4A.5

Strand: Problem Solving

Diocesan Standard Terra Nova Objective	Benchmark Statement
Use a variety of strategies in the problem-solving process	Use appropriate mathematical vocabulary, symbols, and notation with understanding based on prior conceptual work.

Performance Indicators

1. Work with symbols (+,-,x,/,>,<,=) using appropriate vocabulary.

Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.A.6

Strand: Problem Solving

Diocesan Standard Terra Nova Objective	Benchmark Statement
Use a variety of strategies in the problem-solving process	Explain solutions to problems clearly and logically in oral and written work and support solutions with evidence.

Performance Indicators		
1. Show work in orderly steps.		
Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.B.1

Strand: Properties and Concepts of Numbers

Diocesan Standard Terra Nova Objective	Benchmark Statement
Understand and apply basic and advanced properties of the concepts of numbers	Represent and explain whole numbers and fractions.

Performance Indicators		
<ol style="list-style-type: none"> 1. Use physical materials. 2. Use number lines and other pictorial models. 3. Use verbal descriptions. 4. Use place-value concepts to notation to 100,000. 5. Use symbolic renaming ($43=40+3=30+13$). 		
Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.B.2

Strand: Properties and Concepts of Numbers

Diocesan Standard Terra Nova Objective	Benchmark Statement
Understand and apply basic and advanced properties of the concepts of numbers.	Determine number of things in a set.

Performance Indicators
<ol style="list-style-type: none"> 1. Use grouping and counting. 2. Use number theory principles; identify and continue numerical patterns, skip count odd and even numbers. 3. Use combining and arranging. 4. Compare equivalent and non-equivalent money amounts. 5. Use estimation, including rounding. 6. Rounding whole numbers to the nearest tens and hundreds place.

Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.B.3

Strand: Properties and Concepts of Numbers

Diocesan Standard Terra Nova Objective	Benchmark Statement
Understand and apply basic and advanced properties of the concepts of numbers	Read, write and order up to 4-digit whole numbers and simple fractions.

Performance Indicators		
1. Use halves, fourths, tenths and unit fractions which have one as the numerator and commonly used decimals (monetary).		
Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.B.4

Strand: Properties and Concepts of Numbers

Diocesan Standard Terra Nova Objective	Benchmark Statement
Understand and apply basic and advanced properties of the concepts of numbers.	Identify and represent equivalent fractions.

Performance Indicators
1. Identify and represents $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{10}$, and $\frac{1}{16}$.

Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.C.1

Strand: Computation

Diocesan Standard Terra Nova Objective	Benchmark Statement
Use basic and advanced procedures while performing the process of computation	In problem solving situations involving whole numbers, select and efficiently use appropriate computational procedures.

Performance Indicators		
<ol style="list-style-type: none"> 1. Recall basic facts of addition, subtraction, multiplication and division. 2. Use mental math. 3. Estimate. 4. Select and apply algorithms for addition, subtraction, multiplication and division. 5. Multiply a 2,3 or 4-digit number by a 1 and 2 digit number with regrouping. 6. Multiply by 10, 100, and 1,000 7. Divide 3-digit by 1-digit with remainders 8. Use a calculator to assist and check solutions to problems. 9. Use opposite operations to check computation. 		
Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.C.2

Strand: Computation

Diocesan Standard Terra Nova Objective	Benchmark Statement
Use basic and advanced procedures while performing the process of computation.	Add and subtract fractions with like denominators.

Performance Indicators
1. Add and subtract fractions appropriately.

Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.C.3

Strand: Computation

Diocesan Standard Terra Nova Objective	Benchmark Statement
Use basic and advanced procedures while performing the process of computation.	Solve problems involving money, add and subtract decimals.

Performance Indicators		
1. Solve problems involving money. 2. Add and subtract decimals.		
Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.D.1

Strand: Measurement

Diocesan Standard Terra Nova Objective	Benchmark Statement
Understand and apply basic and advanced concepts of measurement	Recognize and describe measurable attributes such as length, liquid capacity, time, weight (mass), temperature, volume.

Performance Indicators		
1. Recognize and describe appropriate and accurate measurements.		
Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.D.2

Strand: Measurement

Diocesan Standard Terra Nova Objective	Benchmark Statement
Understand and apply basic and advanced concepts of measurement	Demonstrate understanding of basic facts, principles and techniques of measuring.

Performance Indicators		
<ol style="list-style-type: none"> 1. Select appropriate non-standard and standard units (metric and US). 2. Select appropriate unit of measure (mile/foot/inch). 3. Use and convert units within a system (yards, feet, inches; kilograms and grams; gallons, quarts, pints and cups, seconds, minutes, hours). 4. Judge the reasonableness of an obtained measurement as it relates to prior experience and familiar benchmarks. 		
Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.D.3

Strand: Measurement

Diocesan Standard Terra Nova Objective	Benchmark Statement
Understand and apply basic and advanced concepts of measurement	Determine measurements directly by using standard tools to the suggested degree of accuracy.

Performance Indicators		
Determine: <ol style="list-style-type: none"> 1. Length to the nearest one-fourth inch or centimeter. 2. Weight to the nearest ounce or gram. 3. Time to the nearest one-minute interval. 4. Monetary value of dollars and cents to total of \$20.00. 		
Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.D.4

Strand: Understand and Apply Basic and Advanced Concepts of Measurement

Diocesan Standard Terra Nova Objective	Benchmark Statement
Understand and apply basic and advanced concepts of measurement	Determine measurements by using basic relationships (such as perimeter and area) and approximate by using estimation techniques.

Performance Indicators		
1. Determine appropriate and accurate measurements and approximations.		
Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.E.1

Strand: Geometry

Diocesan Standard Terra Nova Objective	Benchmark Statement
Understand and apply basic and advanced properties of the concepts of geometry	Describe two and three dimensional figures.

Performance Indicators		
<ol style="list-style-type: none"> 1. Identify and state properties of two and three dimensional figures. 2. Compare, sort and classify two and three dimensional figures. 3. Draw and construct physical models for two dimensional figures. 4. Explain how these figures relate to objects in environment (circles, polygons, trapezoids, prisms, spheres, etc.). 		
Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.E.2

Strand: Geometry

Diocesan Standard Terra Nova Objective	Benchmark Statement
Understand and apply basic and advanced properties of the concepts of geometry	Use physical materials and motion geometry (slides, flips and turns) to identify properties and relationships.

Performance Indicators		
1. Identify symmetry, congruence, similarity.		
Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.E.3

Strand: Geometry

Diocesan Standard Terra Nova Objective	Benchmark Statement
Understand and apply basic and advanced properties of the concepts of geometry	Identify and use relationships among figures.

Performance Indicators		
Identify and use: <ol style="list-style-type: none"> 1. Location (between, adjacent to, interior of). 2. Position (parallel, perpendicular). 3. Intersection (of 2-dimensional). 		
Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.E.4

Strand: Geometry

Diocesan Standard Terra Nova Objective	Benchmark Statement
Understand and apply basic and advanced properties of the concepts of geometry	Use simple two-dimensional coordinate systems to find locations on maps and to represent points and simple figures.

Performance Indicators		
1. Use map coordinates for representation of points and simple figures.		
Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.F.1

Strand: Probability and Data Analysis

Diocesan Standard Terra Nova Objective	Benchmark Statement
Understand and apply basic and advanced concepts of probability and data analysis.	Work with data in the context of real-word situations.

Performance Indicators		
<ol style="list-style-type: none"> 1. Formulate questions that lead to data collection and analysis. 2. Determine what date to collect and how to collect it. 3. Collect, organize and display data. 4. Draw reasonable conclusions based on data. 		
Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.F.2

Strand: Probability and Data Analysis

Diocesan Standard Terra Nova Objective	Benchmark Statement
Understand and apply basic and advanced concepts of probability and data analysis.	Describe a set of data.

Performance Indicators
Describe: <ol style="list-style-type: none"> 1. High and low values and range. 2. Most frequent value (mode). 3. Middle value of a set of ordered data (median).

Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.F.3

Strand: Probability and Data Analysis

Diocesan Standard Terra Nova Objective	Benchmark Statement
Understand and apply basic and advanced concepts of probability and data analysis.	In problem-solving situations read, extract, interpret and use information presented in graphs, tables or charts.

Performance Indicators		
1. Use graphs, tables or charts to solve problems.		
Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.F.4

Strand: Probability and Data Analysis.

Diocesan Standard Terra Nova Objective	Benchmark Statement
Understand and apply basic and advanced concepts of probability and data analysis.	Determine if future events are more, less or equally likely, impossible or certain to occur.

Performance Indicators		
1. Use appropriate determinations of future events.		
Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.F.5

Strand: Probability and Data Analysis.

Diocesan Standard Terra Nova Objective	Benchmark Statement
Understand and apply basic and advanced concepts of probability and data analysis.	Predict outcomes of future events and test predictions using data from a variety of sources.

Performance Indicators		
1. Use data to predict outcomes and test predictions.		
Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.G.1

Strand: Functions and Algebra

Diocesan Standard Terra Nova Objective	Benchmark Statement
Understand and apply basic and advanced properties of functions and algebra.	Use letters, boxes or other symbols to stand for any number, measured quantity, or object in simple situations.

Performance Indicators		
1. Use letters, boxes or other symbols as variables.		
Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.G.2

Strand: Functions and Algebra

Diocesan Standard Terra Nova Objective	Benchmark Statement
Understand and apply basic and advanced properties of functions and algebra.	Use the vocabulary, symbols, and notation of algebra accurately.

Performance Indicators		
<ol style="list-style-type: none"> 1. Use the “=” symbol correctly. 2. Use effectively the Associative Property of Multiplication. 		
Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.G.3

Strand: Functions and Algebra

Diocesan Standard Terra Nova Objective	Benchmark Statement
Understand and apply basic and advanced properties of functions and algebra.	Work with simple linear patterns and relationships in a variety of ways.

Performance Indicators		
<ol style="list-style-type: none"> 1. Recognize and extend number patterns. 2. Describe patterns verbally. 3. Represent patterns with pictures, tables, charts, and graphs. 4. Recognize that different models can represent same pattern or relationship. 5. Use patterns to describe real-world phenomena. 		
Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.G.4

Strand: Functions and Algebra

Diocesan Standard Terra Nova Objective	Benchmark Statement
Understand and apply basic and advanced properties of functions and algebra.	Recognize variability in simple functional relationships by describing how a change in one quantity can produce a change in another.

Performance Indicators		
1. Describe changes in quantities.		
Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.G.5

Strand: Functions and Algebra

Diocesan Standard Terra Nova Objective	Benchmark Statement
Understand and apply basic and advanced properties of functions and algebra.	Use simple equations and inequalities in a variety of ways.

Performance Indicators

1. Use them to represent problem situations.
2. Solve them by different methods.
3. Record and describe solution strategies.

Suggested Activities	Assessment	Resources

Diocese of Jefferson City Curriculum Guide

Content Area: Math
 Grade Range: Fourth
 Section/Heading: 4.G.6

Strand: Functions and Algebra

Diocesan Standard Terra Nova Objective	Benchmark Statement
Understand and apply basic and advanced properties of functions and algebra.	Recognize and use generalized properties and relationships of arithmetic.

Performance Indicators		
1. Recognize and use generalized properties and relationships of arithmetic.		
Suggested Activities	Assessment	Resources