

Warren County School District

PLANNED INSTRUCTION

COURSE DESCRIPTION

Course Title: Mathematics – Grade 3

Course Number: 08323

Course Description and Prerequisites: Completion of Mathematics – Grade 2

This course continues to strengthen and prepare students for real world math application. Content throughout third grade will also strengthen and build previously learned math skills. Numbers, number systems, and number relationships are intertwined with computation, estimation, measurement, mathematical problem solving, and algebraic concepts. Students will be involved in hands-on activities that provide daily challenges to enhance student achievement.

Suggested Grade Level: Third Grade

Length of Course: One Semester X Two Semesters Other

Units of Credit: N/A

PDE Certification and Staffing Policies and Guidelines (CSPG) Required Teacher Certification(s) Elementary

Certification verified by WCSD Human Resources Department:
 X Yes No

Board Approved Textbooks, Software, Materials:

Title:

Publisher:

ISBN #:

Copyright Date:

Date of WCSD Board Approval:

BOARD APPROVAL:**Date Written:** Spring of 2006**Date Approved:** _____**Implementation Year:** _____**Suggested Supplemental Materials:**

Geoboard, color tiles, tangram pieces, clock, attribute blocks, probability dice, spinner, pattern blocks, snap cubes, coins & dollar bills, ruler, and base ten blocks.

Course Standards**PA Academic Standards:**

- 2.1 Numbers, Number Systems and Number Relationships
- 2.2 Computation and Estimation
- 2.3 Measurement and Estimation
- 2.4 Mathematical Reasoning and Connections
- 2.5 Mathematical Problem Solving and Communication
- 2.6 Statistics and Data Analysis
- 2.7 Probability and Predictions
- 2.8 Algebra and Functions
- 2.9 Geometry
- 2.10 Trigonometry
- 2.11 Concepts of Calculus

WCSD Academic Standards: None**Industry or Other Standards:** None**WCSD EXPECTATIONS**

WCSD K-12 Expectations for instruction in writing, reading, mathematics and, technology have been developed and revised annually. The teacher will integrate all WCSD Expectations into this planned instruction

SPECIAL EDUCATION AND GIFTED REQUIREMENTS

The teacher shall make appropriate modifications to instruction and assessment based on a student's Individual Education Plan (I.E.P.) or Gifted Individual Education Plan (G.I.E.P.).

REQUIRED COURSE SEQUENCE AND TIMELINE

Content Sequence	Dates
Addition & subtraction	September & October
Place value & money	November
Time & measurement	December
Multiplication & division concepts	January & February
Multiplication & division facts	
Using data & probability	March to early April
Geometry	
Fractions & decimals	
Multiplication & division w/ larger numbers	April to mid-May
Review of concepts	mid-May to June

WRITING TEAM:

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A yearly review will be done following the PDE release of the annual Eligible Content. Our goal is to keep the math planned instruction updated and effective.

WCSD STUDENT DATA SYSTEM INFORMATION

1. Is there a required final examination? ☐ Yes ☒ No
2. Does this course issue a mark/grade for the report card?
 ☒ Yes ☐ No
3. Does this course issue a Pass/Fail mark? ☐ Yes ☒ No
4. Is the course mark/grade part of the GPA calculation?
 ☐ Yes ☒ No
5. Is the course eligible for Honor Roll calculation? ☐ Yes ☒ No
6. What is the academic weight of the course?
 ☒ No weight/Non credit ☐ Standard weight

**SPECIFIC EDUCATIONAL OBJECTIVES/CORRESPONDING STANDARDS
AND ELIGIBLE CONTENT WHERE APPLICABLE**

The Eligible Content is not in sequence. It is a checklist to be used to comply with state standards.

2.1 Numbers, Number Systems and Number Relationships

	Eligible Content	Performance Indicator	Assessment
2.1.3A	M3.A.3.2.1	- Count by 3's to 30. - Count by 2's, 3's, 5's, 10's, and 100's to an age-appropriate level. - Estimate the sums and differences of two and three digit whole numbers using rounding.	Formative Assessments: - Observation - Evaluate written work - Performance assessment - Tests/quizzes - Problem-solving journal/activity - Create an illustration - Develop a model using manipulatives - Hands on representation - Evaluate oral response - Self-evaluation 4Sight - SuccessMaker - Portfolio - K-W-L - Venn diagram - Homework - Interview Summative Assessments: - Portfolio - Test - Performance assessment - Cooperative project - PSSA
2.1.3B			
2.1.3C	M3.A.1.1.1 M3.A.1.1.3	Recognize, read, and write numbers and equivalent forms up to 10,000 using concrete objects, drawings, word names and symbols.	
2.1.3D	M3.A.1.2	Use drawings, diagrams or models to show the concept of a fraction (eighths, tenths, twelfths) as part of a whole.	
2.1.3E	M3.A.1.3.1 M3.A.1.3.2 M3.A.1.3.3	- Compare and make change up to \$5.00 using manipulatives such as coins and dollar bills. - Find the value of a collection of coins below \$5.00.	
2.1.3F	M3.A.1.1.4 M3.A.1.1.2	Compare values as to greater than, less than, even/odd.	
2.1.3G			
2.1.3H			
2.1.3I			
2.1.3J	M3.A.3.2	- Estimate, approximate, round, or use exact numbers up to 1,000 as appropriate. - Use estimation to arrive at conclusions.	
2.1.3K	M3.A.2.1.2	Describe inverse relationships when adding and subtracting.	

2.1.3L	M3.A.2.1.1 M3.A.3.1.2	• Solve and explain multiplication problems (0-9) through repeated addition and fact families. • Compute and record single and double digit addition and subtraction problems • Select and demonstrate knowledge of the four basic operations (addition & subtraction to 20, multiplication to 9×9, and division to $81 \div 9$).	
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2.2 Computation and Estimation

	Eligible Content	Performance Indicator	Assessment
2.2.3A		Add and subtract in everyday situations using concrete objects.	Formative Assessments: • Observation • Evaluate written work • Performance assessment • Tests/quizzes • Problem-solving journal/activity • Create an illustration • Hands on representation • Evaluate oral response • Self-evaluation • Homework Summative Assessments: • Test • Performance assessment • PSSA
2.2.3B	M3.A.3.1.1	Add and subtract single and double digit numbers with regrouping in vertical form.	
2.2.3C	M3.A.2.1.1	Demonstrate the concept of multiplication as repeated addition and arrays.	
2.2.3D		Demonstrate the concept of division as repeated subtraction and sharing.	
2.2.3E	M3.A.3.2.1	Use estimation skills to arrive at conclusions.	
2.2.3F		Determine the reasonableness of calculated answers.	
2.2.3G		Explain addition and subtraction algorithms (or processes of) with regrouping.	

2.3 Measurement and Estimation

	Eligible Content	Performance Indicator	Assessment
2.3.3A	M3.B.1.2.2	Compare measurable characteristics of different objects on the same dimensions such as time, temperature, area, length, capacity & perimeter.	Formative Assessments: • Observation • Evaluate written work • Performance assessment • Tests/quizzes • Problem-solving journal/activity • Create an illustration • Develop a model using manipulatives • Hands on representation • Evaluate oral response • Self-evaluation • Homework
2.3.3B	M3.B.2.1.1	Determine the measurement of objects to half inch and whole centimeters.	
2.3.3C	M3.B.1.1.2	• Determine and compare elapsed time in half hour and five minute increments.	
2.3.3D	M3.B.1.1.1	• Tell time to the minute using an analog clock. • Tell time to the minute using a digital clock.	
2.3.3E	M3.B.1.2.1	Determine the appropriate unit of measure.	
2.3.3F			

2.3.3G	M3.B.2.2.1	• Match the object with its approximate measurement. • Estimate and verify measurements. • Integrate length, mass/weight, temperature and capacity into the science curriculum.	Summative Assessments: • Portfolio • Test • Performance assessment
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2.4 Mathematical Reasoning and Connection

	Eligible Content	Performance Indicator	Assessment
2.4.3A		Make and check predictions about the quantity, size and shape of objects or groups of objects.	Formative Assessments: • Observation • Evaluate written work • Performance assessment
2.4.3B		Use measurements in everyday situations.	

2.5 Mathematical Problem Solving and Communication

	Eligible Content	Performance Indicator	Assessment
2.5.3A	M3.A.2.1.3	Select and use appropriate problem-solving strategies such as guess and check & working backwards.	Formative Assessments: • Observation • Evaluate written work • Performance assessment
2.5.3B		Determine if sufficient information is present to solve and explain a problem.	
2.5.3C		Select and use an appropriate methods, materials, and strategies to solve problems such as mental mathematics, paper and pencil, and concrete objects.	Summative Assessments: • Portfolio • Test

2.6 Statistics and Data Analysis

	Eligible Content	Performance Indicator	Assessment
2.6.3A	M3.E.1.2.2	Gather, organize, and display data using tally charts, bar graphs, pictographs and tables.	Formative Assessments: • Observation • Performance assessment • Problem-solving journal/activity • Develop a model using manipulatives • Hands on representation
2.6.3B	M3.E.1.1	Formulate and answer questions based on data shown on graphs.	
2.6.3C		Predict the likely number of times a condition will occur based on analyzed data.	
2.6.3D		Form and justify an opinion on whether a given statement is reasonable based on a comparison to data.	Summative Assessments: • Test

2.7 Probability and Predictions

	Eligible Content	Performance Indicator	Assessment
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2.7.3A		Predict and measure the likelihood of events and recognize that the results of an experiment may not match predicted outcomes.	Formative Assessments: • Observation • Evaluate written work • Problem-solving journal/activity • Develop a model using manipulatives Summative Assessments: • Test
2.7.3B		Design a fair and unfair spinner.	
2.7.3C	M3.E.1.2.1	List or graph the possible results of an experiment.	
2.7.3D	M3.E.1.1.1	Analyze data using the concepts of largest, smallest, most often, least often, and middle.	

2.8 Algebra and Functions

	Eligible Content	Performance Indicator	Assessment
2.8.3A	M3.D.1.1.1	• Extend or find a missing element in a pattern of numbers or shapes. • Recognize, extend or replicate a pattern.	Formative Assessments: • Observation • Evaluate written work • Performance assessment • Tests/quizzes • Problem-solving journal/activity • Create an illustration • Develop a model using manipulatives • Hands on representation • Evaluate oral response • Portfolio • Venn diagram • Homework • Interview Summative Assessments: • Portfolio • Test • Performance assessment • Cooperative project
2.8.3B	M3.D.2.2.1	Solve number sentences using concrete objects to make a number sentence true.	
2.8.3C		Supply a missing addend.	
2.8.3D	M3.D.2.1.1	Create a story to math a given combination of symbols and numbers, and explain the solutions and symbols.	
2.8.3E			
2.8.3F	M3.D.2.2.2	• Explain the missing symbol (+, -, =, <, >) that makes a number sentence true. • Use a math journal to define terms and write out problem solving steps.	
2.8.3G		Gather information and use a table or chart to display the data.	
2.8.3H		Describe and interpret the data shown in table or chart.	
2.8.3I		Demonstrate the simple function rules through a pattern or rule with pieces that can change.	
2.8.3J		• Analyze simple functions and relationships. • Locate points on a simple grid.	

2.9 Geometry

	Eligible Content	Performance Indicator	Assessment
2.9.3A	M3.C.1.1.1 M3.C.1.1.2	• Name, identify and describe two-dimensional geometric shapes such as circle, square, rectangle, triangle, pentagon, hexagon, octagon. • Name, identify and describe three-dimensional shapes such as sphere, cube, cylinder, cone, pyramid, rectangular prism.	Formative Assessments: • Observation • Evaluate written work • Tests/quizzes • Problem-solving journal/activity • Create an illustration • Develop a model using manipulatives
2.9.3B			

2.9.3C		• Draw two- and three-dimensional geometric shapes. • Construct rectangles, squares, and triangles on a geoboard and graph paper.	- manipulatives • Hands on representation • Evaluate oral response • Homework • Interview Summative Assessments: • Test • Performance assessment
2.9.3D		Find and describe geometric patterns in real life.	
2.9.3E	M3.C.2.1.1	Identify and draw lines of symmetry in two-dimensional geometric shapes with manipulatives.	
2.9.3F	M3.C.2.1.2	Identify symmetry in nature.	
2.9.3G		Fold paper to demonstrate the reflections about a line.	
2.9.3H	M3.C.2.1.2	Use art to show relationships between figures using symmetry.	
2.9.3I			

2.10 Trigonometry

	Eligible Content	Performance Indicator	Assessment
2.10.3A		Identify right angles in the environment.	Formative Assessments: • Observation • Evaluate written work • Problem-solving journal/activity
2.10.3B		Model right angles and right triangles using manipulatives such as attribute blocks, geoboard, and pattern blocks.	

2.11 Concepts of Calculus

	Eligible Content	Performance Indicator	Assessment
2.11.3A			Formative Assessments: • Observation • Evaluate written work • Problem-solving journal/activity • Develop a model using manipulatives
2.11.3B	M3.E.1.1.1	Identify least and greatest values represented in bar graphs and pictographs.	
2.11.3C		Categorize rates of change on a graph as faster or slower (Social Studies).	
2.11.3D	M3.D.1.1.2	Identify and explain the rule for a pattern using manipulatives such as attribute blocks, pattern blocks, and color tiles.	

ASSESSMENTS

PSSA Assessment Anchors Addressed: The teacher must be knowledgeable of the PDE Assessment Anchors and/or Eligible Content and incorporate them into this planned instruction. Current assessment anchors can be found at pde@state.pa.us.

Formative Assessments: The teacher will develop and use standards-based assessments throughout the course.

Portfolio Assessment: ____ Yes X No

District-wide Final Examination Required: ____ Yes X No

Course Challenge Assessment: N/A