Warren County School District

PLANNED INSTRUCTION

COURSE DESCRIPTION

Course Title: Mathematics – Grade 1

Course Number: 08123

Course Description and Prerequisites:

This course strengthens and stretches previously introduced mathematical skills such as money, time, counting, measurement, shapes, exploration of numbers, and patterns. Students will have fun in first grade mathematics as teachers use manipulatives and other concrete objects to strengthen mathematical concepts taught throughout the school year.

Suggested Grade Level: First 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:

Suggested Supplemental Materials:
Clock, snap cubes, counters, pattern blocks, geometric shapes, attribute blocks, geoboard, color tiles, probability dice, coins & dollar bills, ruler, hundred chart, 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.).

SPECIFIC EDUCATIONAL OBJECTIVES/CORRESPONDING STANDARDS AND ELIGIBLE CONTENT WHERE APPLICABLE

2.1 Numbers, Number Systems and Number Relationships

x – performance assessed during that semester

	Performance Indicator	1	2	Assessment
A.	• Count by 2's to 100. • Count by 5's, and 10's to 100.	 X	X X	Formative Assessments: • Observation • Evaluate written work • Performance assessment • Tests/quizzes • Problem-solving • Create an illustration • Develop a model using manipulatives • Hands on representation • Evaluate oral response • SuccessMaker • Interview • Venn Diagram Summative Assessments: • Portfolio • Test • Performance assessment
B.	Use manipulatives to represent the quantities of whole, ½, 1/3, and ¼.		X	
C.	Write and recognize equivalent forms of the same number (0-100) through the use of concrete objects, drawings, word names and symbols.	X	X	
D.	Use drawings, diagrams, or models to show the concept of the fractions ½, 1/3, and ¼ as part of a whole		X	
E.	• Recognize pennies, nickels, dimes, quarters, and one dollar. • Count pennies, nickels, and dimes in combinations up to $1.00.		X X	
F.	• Apply number patterns and compare values up to 100 on a hundred board. • Identify and explain a given pattern on a hundred board.	X X	X	
G.	• Use concrete objects to represent the numbers 1 through 100. • Use concrete objects to group and order sets with numbers 1 through 100.	X X	X X	
H.	Demonstrate one to one correspondence to 100.	X	X	
I.				
J.	Estimate and approximate numbers to 25.	X	X	
K.	Describe inverse relationship between addition and subtraction fact families to 100.		X	
L.	• Demonstrate knowledge of basic addition and subtraction facts to 10 using manipulatives. • Demonstrate mental proficiency in addition and subtraction facts to 18.		X X	

2.2 Computation and Estimation

	Performance Indicator	1	2	Assessment
A.	• Apply addition and subtraction of one-digit numbers. • Apply addition and subtraction with two-digit numbers to 100.	X	X X	Formative Assessments: • Observation • Evaluate written work • Performance assessment • Create an illustration • Develop a model using manipulatives • Hands on representation • Evaluate oral response • SuccessMaker Summative Assessments: • Test • Performance assessment
B.				
C.	Demonstrate the concept of multiplication as repeated addition.		X	
D.				
E.	Use estimation skills to arrive at conclusions.		X	
F.	Introduce determining the reasonableness of calculated answers with manipulatives and prompts.	X	X	
G.				

2.3 Measurement and Estimation

	Performance Indicator	1	2	Assessment
A.	Compare measurable progression of time to hour/half hour.		**X**	Formative Assessments: • Observation • Evaluate written work • Performance assessment • Tests/quizzes • Problem-solving • Create an illustration • Develop a model using manipulatives • Hands on representation • Evaluate oral response • SuccessMaker • Interview • Venn Diagram Summative Assessments: • Portfolio • Test • Performance assessment
B.	Determine the measurement of objects with non-standard and standard units to the nearest inch with prompts.		X	
C.	• Determine and compare elapsed times such as today, tomorrow, and yesterday. • Name and order the months of the year.	X X	X X	
D.	• Tell time to the hour and half-hour using an analog clock. • Tell time to the hour and half-hour using a digital clock.		X X	
E.	Introduce how to use the appropriate unit of measure.		X	
F.	• Use concrete objects to determine the area of a square and rectangle. • Find the perimeter of an object with teacher prompts.		X X	
G.	Estimate and verify measurements of length.		X	

2.4 Mathematical Reasoning and Connections

	Performance Indicator	1	2	Assessment
A.	Make, check, and verify predictions about the quantity, size and shape of objects and groups of objects.		X	Formative Assessments: • Observation • Evaluate written work • Performance assessment • Problem-solving • Develop a model using manipulatives • Hands on representation • Evaluate oral response Summative Assessments: • Test • Performance assessment
B.	Use measurement in everyday situations within the classroom.		X	

2.5 Mathematical Problem Solving and Communication

	Performance Indicator	1	2	Assessment
A.	Introduce appropriate problem-solving strategies.	X	X	Formative Assessments: • Observation • Evaluate written work • Performance assessment • Problem-solving • Create an illustration • Develop a model using manipulatives • Hands on representation • Evaluate oral response • Venn Diagram Summative Assessments: • Test • Performance assessment
B.	Determine when sufficient information is present to solve a problem using teacher prompts.		X	
C.	• Select and use appropriate methods, materials, and strategies to solve problems. • Create and write a word problem.	X	X X	

2.6 Statistics and Data Analysis

	Performance Indicator	1	2	Assessment
A.	Gather, organize, and display data using pictures, tallies, charts, bar graphs, and charts with less teacher modeling.	X	X	Formative Assessments: • Observation • Evaluate written work • Problem-solving • Create an illustration • Develop a model using manipulatives • Hands on representation • Evaluate oral response Summative Assessments: • Test • Performance assessment
B.	Formulate and answer questions based on data shown on graphs with teacher modeling.	X	X	
C.	Predict the likely number of times a condition will occur based on data.	X	X	
D.	Introduce forming and justifying an opinion on whether a given statement is reasonable based on data.	X	X	

2.7 Probability and Predictions

	Performance Indicator	1	2	Assessment
A.	Predict and measure the likelihood of events, and recognize that the results of an experiment may not match predicted outcomes.		X	Formative Assessments: • Observation • Evaluate written work • Problem-solving • Create an illustration • Hands on representation • Evaluate oral response Summative Assessments: • Test • Performance assessment
B.				
C.	List or graph the possible results of an experiment, given the data.		X	
D.	Analyze data using the concepts of largest and smallest.		X	

2.8 Algebra and Functions

	Performance Indicator	1	2	Assessment
A.	Recognize, describe, extend, create, and replicate a variety of number patterns with teacher modeling.	X	X	Formative Assessments: • Observation • Evaluate written work • Performance assessment • Tests/quizzes • Problem-solving • Create an illustration • Develop a model using manipulatives • Hands on representation • Evaluate oral response • Self-evaluation • SuccessMaker • Venn Diagram Summative Assessments: • Test • Performance assessment
B.	Use concrete objects, and trial and error to solve numbers sentences with teacher assistance.	X	X	
C.	Substitute a missing addend in a number sentence with teacher direction.		X	
D.	Create a story to match a given combination of symbols and numbers.		X	
E.				
F.	Explain the meaning and solution of numbers.		X	
G.	Model the use of a chart or table to display information.	X	X	
H.	Prompt students to describe and interpret the data shown in tables and charts.	X	X	
I.				
J.				

2.9 Geometry

	Performance Indicator	1	2	Assessment
A.	Name and label geometric shapes in two and three dimensions (circle/sphere, square/cube, triangle/pyramid, rectangle/prism).	X	X	Formative Assessments: • Observation • Evaluate written work • Performance assessment • Tests/quizzes • Problem-solving • Create an illustration • Develop a model using manipulatives • Hands on representation • Evaluate oral response • Self-evaluations • SuccessMaker • Interview • Venn Diagram Summative Assessments: • Portfolio • Test • Performance assessment
B.	Build geometric shapes with manipulative such as geoboard, pattern blocks, color tiles, and attribute blocks.	X	X	
C.	Draw two-dimensional drawings and graphs with teacher direction.	X	X	
D.	Find and describe two-dimensional geometric figures in real life.	X	X	
E.	Identify symmetry with teacher introduction.		X	
F.	Identify symmetry in nature with teacher direction.		X	
G.	Introduce folding of paper to demonstrate the reflections of a line.		X	
H.	Show relationships between and among figures using reflections with teacher prompt.		X	
I.	Predict how shapes can be changed by combining or dividing them.		X	

2.10 Trigonometry

	Performance Indicator	1	2	Assessment
A.	Introduce the identification of right angles in the environment.		X	Formative Assessments: • Observation Summative Assessments: • Performance assessment
B.	Introduce right angles and triangles using concrete objects.		X	

2.11 Concepts of Calculus

	Performance Indicator	1	2	Assessment
A.	Identify whole number quantities from least to greatest 0-100.		X	Formative Assessments: • Observation • Evaluate written work • Problem-solving • Create an illustration • Develop a model using manipulatives • Hands on representation • Evaluate oral response • SuccessMaker Summative Assessments: • Performance assessment
B.	Model the identification of least and greatest values represented in bar graphs and pictographs.	X	X	
C.				
D.	Continue a pattern of numbers or objects with teacher modeling.	X	X	

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: __X__ Yes ____ No

District-wide Final Examination Required: ____ Yes __X__ No

Course Challenge Assessment: N/A

REQUIRED COURSE SEQUENCE AND TIMELINE

Content Sequence	Dates
Exploring Numbers and Patterns Understanding Addition	September
Understanding Subtraction	October
Basic Fact Strategies	November
Geometry and fractions	December
Patterns and Numbers	January
Measurement	April
Time	March
Relating addition and subtraction	March
Money	April
Addition and subtraction to 18	May & June
Two-digit addition and subtraction	May & June

WRITING TEAM:

Cynthia Blodgett Jane Bonavita Christina Chase

Tamre VanOrd Melanie Victor

WCSD STUDENT DATA SYSTEM INFORMATION

1. Is there a required final examination? ____ Yes __X__ No
2. Does this course issue a mark/grade for the report card?
   ___X_ Yes____ No
3. Does this course issue a Pass/Fail mark? ____ Yes __X__ No
4. Is the course mark/grade part of the GPA calculation?
   ____ Yes __X__ No
5. Is the course eligible for Honor Roll calculation? ____ Yes __X__ No
6. What is the academic weight of the course?
   __X__ No weight/Non credit ____ Standard weight
   ____ Enhanced weight (Describe) _____