

Wallenpaupack Area School District

COURSE: Mathematics

GRADE LEVEL: Third Grade

LENGTH OF COURSE: 180 Days/ 60 Minutes Per Day

TEXT: Everyday Mathematics and/or Mathematics Plus

PUBLISHER: Everyday Learning Corporation and/or Harcourt Brace and Company

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COURSE DESCRIPTION:

The third grade math program is designed to allow students to apply mathematical understanding of concepts to real world situations. Based on the state grade level benchmarks, the students will demonstrate knowledge of concepts including problem solving, critical thinking, and computation. The structures of the curriculum ensures that the mathematical concepts and applications are explored and maintained throughout a vast array of activities.

AREAS OF STUDY:

Numbers, Number Systems and Number Relationships
Computation and Estimation
Measurement and Estimation
Mathematical Reasoning and Connections
Mathematical Problem Solving and Communication
Statistics and Data Analysis
Probability and Predictions
Algebra and Functions
Geometry
Trigonometry
Concepts of Calculus

CURRICULUM WRITING TEAM:

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DATE OF REVISION:

2002

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 3

PA Standard: 2.1.3

Topics:	Skills:
Numbers	Count using whole numbers (to 10,000) by 2's, 3's, 5's, 10's, and 100's Use whole numbers and fractions to represent quantities Represent equivalent forms of the same number through the use of concrete objects, drawings, word names and symbols Use drawings, diagrams or models to show the concept of fraction as part of a whole Count, compare and make change using a collection of coins and one dollar bills Apply number patterns (even and odd) and compare values of numbers on the hundred board Use concrete objects to count, order and group Demonstrate an understanding of one-to-one correspondence Apply place-value concepts and numeration to counting, ordering and grouping Estimate, approximate, round or use exact numbers as appropriate Describe the inverse relationship between addition and subtraction Demonstrate knowledge of basic facts in four basic operations
Activities:	Performance Assessment:
Written practice Hundred board Problem solving Number line Math literature connection Calculator Rote counting to 10,000 Counters Skip count by 2's, 3's, 5's, 10's, 25's, 100's Name-collection box Fact families Graph paper Slates/chalkboard Flashcards Place-value chart	Teacher observation Oral questions Slate/board work Teacher-made tests Textbook tests Homework assignments Classroom participation Checklist Rubric District Criterion Test Paper/pencil activities

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Activities: (continued)	
Math deck Play money Overhead Vocabulary	

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Course: Mathematics

Grade Level: Grade 3

PA Standard: 2.2.3

Topics:	Skills:
Computation and estimation	Apply addition and subtraction in everyday situations using concrete objects Solve single and double digit addition and subtraction problems with regrouping in vertical form Demonstrate the concept of multiplication as repeated addition and arrays Demonstrate the concept of division as repeated subtraction and as sharing Use estimation skills to arrive at conclusion Determine the reasonableness of calculated answers Explain addition and subtraction algorithms with regrouping
Activities:	Performance Assessments:
Written practice Problem solving Vocabulary Math literature connection Estimating/rounding Fact triangles Flashcards Graph paper Counters Slates/chalkboard Calculators Base 10 blocks Math deck Overhead	Teacher observation Oral questions Slate/board work Teacher-made tests Textbook tests Homework assignments Classroom participation Checklist Rubric District Criterion Test Paper/pencil activities

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 3

PA Standard: 2.3.3

Topics:	Skills:
Measurement and estimation	Compare measurable characteristics of different objects on the same dimensions (e.g., time, temperature, area, length, weight, capacity, perimeter) Determine the measurement of objects with non-standard and standard units (e.g., US customary and metric) Determine and compare elapsed times Tell time (analog and digital) to the minute Determine the appropriate unit of measure Use concrete objects to determine area and perimeter Estimate and verify measurements. Demonstrate that a single object has different attributes that can be measured in different ways (e.g., length, mass, weight, time, area, temperature, capacity, perimeter)
Activities:	Performance Assessments:
Written practice Yard stick/meter stick Problem solving Templates Vocabulary 3-D solid shapes Math literature connection Graph paper Estimating/rounding Paper clips Rulers Geoboards Tape measures Measuring units Clock Square tiles Thermometer Overhead Scale	Teacher observation Oral questions Slate/board work Teacher-made tests Textbook tests Homework assignments Classroom participation Checklist Rubric District Criterion Test Paper/pencil activities Class projects

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 3

PA Standard: 2.4.3

Topics:	Skills:
Mathematical reasoning	Make, check and verify predictions about the quantity, size and shape of objects and groups of objects Use measurements in everyday situations (e.g., determine the geography of the school building)
Activities:	Performance Assessments:
Written practice Problem solving Vocabulary Math literature connection Estimating/rounding Slates/chalkboard Rulers Tape measures Yard stick/meter stick Solid figures (3-D shapes) Graph paper Paper clips Square tiles Greater than/less than Tangrams	Teacher observation Oral questions Slate/board work Teacher-made tests Textbook tests Homework assignments Classroom participation Checklist Rubric District Criterion Test Paper/pencil activities Class projects

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 3

PA Standard: 2.5.3

Topics:	Skills:
Mathematical problem solving	Use appropriate problem-solving strategies (e.g., guess and check, working backwards) Determine when sufficient information is present to solve a problem and explain how to solve a problem Select and use an appropriate method, materials and strategy to solve problems, including mental mathematics, paper and pencil and concrete objects
Activities:	Performance Assessments:
Written practice Problem solving Guess and check Work backwards Make a picture Use a chart, graph, tally marks Too much/too little information Vocabulary Math literature connection Daily word problems Follow math rubric for problem-solving Estimating/rounding Open ended questions/written responses	Teacher observation Oral questions Slate/board work Teacher-made tests Textbook tests Homework assignments Classroom participation Checklist Rubric District Criterion Test Paper/pencil activities

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 3

PA Standard: 2.6.3

Topics:	Skills:
Data analysis	Gather, organize and display data using pictures, tallies, charts, bar graphs and pictographs Formulate and answer questions based on data shown on graphs Predict the likely number of times a condition will occur based on analyzed data Form and justify an opinion on whether a given statement is reasonable based on a comparison to data
Activities:	Performance Assessments:
Written practice Problem solving Vocabulary Math literature connection Estimate/Rounding Bar graphs Tallies Charts Pictographs Graph paper Venn diagram Line graphs Pie graphs	Teacher observation Oral questions Slate/board work Teacher-made tests Textbook tests Homework assignments Classroom participation Checklist Rubric District Criterion Test Paper/pencil activities Class projects

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 3

PA Standard: 2.7.3

Topics:	Skills:
Probability and predications	Predict and measure the likelihood of events and recognize that the results of an experiment may not match predicted outcomes Design a fair and unfair spinner List or graph the possible results of an experiment Analyze data using the concepts of largest, smallest, most often, least often and middle
Activities:	Performance Assessments:
Written practice Problem solving Vocabulary Math literature connection Estimating/rounding Paper plates and brass fasteners Greater than/less than symbols Graph paper Charts Bar graphs Line graphs Experiment with spinners, coins, dice and so forth to demonstrate probability	Teacher observation Oral questions Slate/board work Teacher-made tests Textbook tests Homework assignments Classroom participation Checklist Rubric District Criterion Test Paper/pencil activities

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 3

PA Standard: 2.8.3

Topics:	Skills:
Algebra and functions	Recognize, describe, extend, create and replicate a variety of patterns including attribute, activity, number and geometric patterns Use concrete objects and trial and error to solve number sentences and check if solutions are sensible and accurate Substitute a missing addend in a number sentence Create a story match a given combination of symbols and numbers Use concrete objects and symbols to model the concepts of variables, expressions, equations and inequalities Explain the meaning of solutions and symbols Use a table or a chart to display information Describe and interpret the data shown in tables and charts Demonstrate simple function rules Analyze simple functions and relationships and locate points on a simple grid
Activities:	Performance Assessments:
Written practice Problem solving Vocabulary Math literature connection Estimating/rounding Tables/charts Calculator Graph paper Game "Here I Am" Map skills Battleship Pattern blocks	Teacher observation Oral questions Slate/board work Teacher-made tests Textbook tests Homework assignments Classroom participation Checklist Rubric District Criterion Test Paper/pencil activities

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 3

PA Standard: 2.9.3

Topics:	Skills:
Geometry	Name and label geometric shapes in two and three dimensions (e.g., circle/sphere, square/cube, triangle/pyramid, rectangle/prism) Build geometric shapes using concrete objects (e.g., manipulatives) Draw two-and three-dimensional geometric shapes and construct rectangles, squares and triangles on the geoboard and on graph paper satisfying specific criteria Find and describe geometric figures in real life Identify and draw lines of symmetry in geometric figures Identify symmetry in nature Fold paper to demonstrate the reflections about a line Show relationships between and among figures using reflections Predict how shapes can be changed by combining or dividing them
Activities:	Performance Assessments:
Written practice Problem solving Vocabulary Math literature connection Estimating/rounding Template 3-D solid shapes Mirror 2-D plane figures Straws and twist ties Pattern blocks Tangrams Geoboards Origami Graph paper	Teacher observation Oral questions Slate/board work Teacher-made tests Textbook tests Homework assignments Classroom participation Checklist Rubric District Criterion Test Paper/pencil activities Class projects

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 3

PA Standard: 2.10.3

Topics:	Skills:
Trigonometry	Identify right angles in the environment Model right angles and right triangles using concrete objects
Activities:	Performance Assessments:
Written practice Problem Solving Vocabulary Math literature connection Estimating/rounding Toothpicks/marshmallows Straws/twist ties Cubes Craft sticks Geoboards	Teacher observation Oral questions Slate/board work Teacher-made tests Textbook tests Homework assignments Classroom participation Checklist Rubric District Criterion Test Paper/pencil activities

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 3

PA Standard: 2.11.3

Topics:	Skills:
Calculus	Identify whole number quantities and measurements from least to most and greatest value Identify least and greatest values represented in bar graphs and pictographs Categorize rates of change as faster and slower Continue a pattern of numbers or objects that could be extended infinitely
Activities:	Performance Assessments:
Written practice Problem solving Vocabulary Math literature connection Estimating/rounding Tape measure Number line Graphs Pictographs Pie graphs Charts Tally marks Colored counters	Teacher observation Oral questions Slate/board work Teacher-made tests Textbook tests Homework assignments Classroom participation Checklist Rubric District Criterion Test Paper/pencil activities