

# *Wallenpaupack Area School District*

## **COURSE:** Mathematics

**GRADE LEVEL:** Fourth 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 & Co.

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### **COURSE DESCRIPTION:**

The fourth grade math program is designed to allow students the opportunity to apply mathematical understanding of concept to real world situations. Students actively participate in the calculation, demonstration and application of concepts which include problem solving, computation, measurement, use of number systems, geometry, organizing and interpreting data, fractions, decimals, probability and statistics, algebra, estimation and reasoning.

### **AREAS OF STUDY:**

PA Standards  
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 4

**PA Standard:** 2.1.4.A  
2.1.4.B  
2.1.4.C  
2.1.4.D  
2.1.4.E  
2.1.4.F  
2.1.4.G

<b>Topics:</b> Numbers, nuber systems	<b>Skills:</b> Read and write numbers to one million using whole numbers Interpret place value to one million Calculate change up to \$99.99 Make change up to \$9.99 using the smallest number of coins and bills
<b>Activities:</b> Written practice Problem solving Place value mats/charts Base ten blocks Counters Number lines Money manipulatives Fraction patterns blocks Geoboards Other manipulatives related to specific skills	<b>Performance Assessments:</b> Teacher observation Oral questions Class projects Homework assignments Teacher made assessment Problem solving rubric Classroom participation Critical thinking (problem of the day)/mental math/math message Program assessment District End of the Year Assessment

# Wallenpaupack Area School District

**Course:** Mathematics

**Grade Level:** Grade 4

**PA Standard:** 2.2.4.A  
2.2.4.B  
2.2.4.C  
2.2.4.D  
2.2.4.E  
2.2.4.F  
2.2.4.G  
2.2.4.H  
2.2.4.I

<b>Topics:</b>	<b>Skills:</b>
Computation and estimation	
<b>Activities:</b>	<b>Performance Assessments:</b>
Written practice Problem solving Calculators Clocks Number lines Money manipulatives Other manipulatives related to specific skills Variety of game activities	Teacher observation Oral questions Class projects Homework assignments Teacher made assessment Problem solving rubric Classroom participation Critical thinking (problem of the day)/mental math/math message Program assessment District End of the Year Assessment

# Wallenpaupack Area School District

**Course:** Mathematics

**Grade Level:** Grade 4

**PA Standard:** 2.3.4.A  
2.3.4.B  
2.3.4.C  
2.3.4.D  
2.3.4.E

<b>Topics:</b>	<b>Skills:</b>
Measurement	Describe the attributes of temperature using Fahrenheit and Celsius Calculate the perimeter and area of figures Introduce formulas for determining measurements (e.g., area, volume, distance) Tell time to the minute, and determine and compare elapsed times Use scale measurements to interpret maps or drawings
<b>Activities:</b>	<b>Performance Assessments:</b>
Written practice Problem solving Appropriate measurement instruments (e.g., in./cm. rulers, tape measures) Graph paper Other manipulatives related to specific skills Social studies activities	Teacher observation Oral questions Class projects Homework assignments Teacher made assessment Problem solving rubric Classroom participation Critical thinking (problem of the day)/mental math/math message Program assessment District End of the Year Assessment

# Wallenpaupack Area School District

**Course:** Mathematics

**Grade Level:** Grade 4

**PA Standard:** 2.4.4.A  
2.4.4.B  
2.4.4.C  
2.4.4.D  
2.4.4.E  
2.4.4.F

<b>Topics:</b>	<b>Skills:</b>
Mathematical reasoning	
<b>Activities:</b>	<b>Performance Assessments:</b>
Written practice (include logic problems) Problem solving Use date interpretation Other manipulatives	Teacher observation Oral questions Class projects Homework assignments Teacher made assessment Problem solving rubric Classroom participation Critical thinking (problem of the day)/mental math/math message Program assessment District End of the Year Assessment

# Wallenpaupack Area School District

**Course:** Mathematics

**Grade Level:** Grade 4

**PA Standard:** 2.5.4.A  
2.5.4.B  
2.5.4.C  
2.5.4.D  
2.5.4.E

<b>Topics:</b>	<b>Skills:</b>
Mathematical problem solving	Explain the method and reasoning behind the problem's solution to determine reasonableness of and to verify results with respect to the original problem
<b>Activities:</b>	<b>Performance Assessments:</b>
Written practice Problem solving process Identification of various strategies, select appropriate strategy to solve problem Dictionaries	Teacher observation Oral questions Class projects Homework assignments Teacher made assessment Problem solving rubric Classroom participation Critical thinking (problem of the day)/mental math/math message Program assessment District End of the Year Assessment

# Wallenpaupack Area School District

**Course:** Mathematics

**Grade Level:** Grade 4

**PA Standard:** 2.6.4.A  
2.6.4.B  
2.6.4.C  
2.6.4.D  
2.6.4.E

<b>Topics:</b>	<b>Skills:</b>
Data analysis	
<b>Activities:</b>	<b>Performance Assessments:</b>
Written practice Problem solving Use of graphing materials	Teacher observation Oral questions Class projects Homework assignments Teacher made assessment Problem solving rubric Classroom participation Critical thinking (problem of the day)/mental math/math message Program assessment District End of the Year Assessment

# Wallenpaupack Area School District

**Course:** Mathematics

**Grade Level:** Grade 4

**PA Standard:** 2.7.4.A  
2.7.4.B  
2.7.4.C  
2.7.4.D  
2.7.4.E  
2.7.4.F  
2.7.4.G  
2.7.4.H  
2.7.4.I  
2.7.4.J

<b>Topics:</b>	<b>Skills:</b>
Probability and predictions	Generate a list of all possible outcomes of given events by constructing a table or developing an organized list Present results of an experiment using visual representations (e.g., tables, charts, graphs)
<b>Activities:</b>	<b>Performance Assessments:</b>
Written practice Problem solving Spinners Calculators	Teacher observation Oral questions Class projects Homework assignments Teacher made assessment Problem solving rubric Classroom participation Critical thinking (problem of the day)/mental math/math message Program assessment District End of the Year Assessment



# Wallenpaupack Area School District

**Course:** Mathematics

**Grade Level:** Grade 4

**PA Standard:** 2.8.4.A  
2.8.4.B  
2.8.4.C  
2.8.4.D  
2.8.4.E  
2.8.4.F  
2.8.4.G  
2.8.4.H  
2.8.4.I

<b>Topics:</b> Algebra	<b>Skills:</b> Gather information, analyze the collected data, and display it (e.g., missing addends, continue the pattern)
<b>Activities:</b> Written practice Problem solving Graphing materials	<b>Performance Assessments:</b> Teacher observation Oral questions Class projects Homework assignments Teacher made assessment Problem solving rubric Classroom participation Critical thinking (problem of the day)/mental math/math message Program assessment District End of the Year Assessment

# *Wallenpaupack Area School District*

**Course:** Mathematics

**Grade Level:** Grade 4

**PA Standard:** 2.9.4.A  
 2.9.4.B  
 2.9.4.C  
 2.9.4.D  
 2.9.4.E  
 2.9.4.F  
 2.9.4.G  
 2.9.4.H  
 2.9.4.I  
 2.9.4.J  
 2.9.4.K  
 2.9.4.L

<b>Topics:</b> Geometry	<b>Skills:</b> Draw congruent polygons and identify lines of symmetry Define parallel and perpendicular lines
<b>Activities:</b> Written practice Problem solving Geometry templates Geometry manipulatives Geoboards Other manipulatives Computer software for tessellation activities	<b>Performance Assessments:</b> Teacher observation Oral questions Class projects Homework assignments Teacher made assessment Problem solving rubric Classroom participation Critical thinking (problem of the day)/mental math/math message Program assessment District End of the Year Assessment

# Wallenpaupack Area School District

**Course:** Mathematics

**Grade Level:** Grade 4

**PA Standard:** 2.10.A  
2.10.B

<b>Topics:</b> Trigonometry	<b>Skills:</b> Compare right angles with acute and obtuse angles
<b>Activities:</b> Written practice Problem solving Geoboards Protractors Other manipulatives Visual aids	<b>Performance Assessments:</b> Teacher observation Oral questions Class projects Homework assignments Teacher made assessment Problem solving rubric Classroom participation Critical thinking (problem of the day)/mental math/math message Program assessment District End of the Year Assessment

# Wallenpaupack Area School District

**Course:** Mathematics

**Grade Level:** Grade 4

**PA Standard:** 2.11.4.A  
 2.11.4.B  
 2.11.4.C  
 2.11.4.D  
 2.11.4.E  
 2.11.4.F

<b>Topics:</b>	<b>Skills:</b>
Calculus	Observe patterns of numbers and make predictions to determine and continue the sequence Calculate area of rectangles and squares
<b>Activities:</b>	<b>Performance Assessments:</b>
Written practice Problem solving Base ten blocks Graphing materials Geometry template Other appropriate manipulatives	Teacher observation Oral questions Class projects Homework assignments Teacher made assessment Problem solving rubric Classroom participation Critical thinking (problem of the day)/mental math/math message Program assessment District End of the Year Assessment