

Wallenpaupack Area School District

COURSE: Mathematics

GRADE LEVEL: First Grade

LENGTH OF COURSE: 180 Days/ 40 Minutes Per Day

TEXT: Everyday Mathematics

PUBLISHER: Everyday Learning Corporation
The University of Chicago School Mathematics Project

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COURSE DESCRIPTION:

The First Grade math program is designed as a problem-solving approach based on everyday situations. It offers the frequent practice of basic skills and an instructional approach that revisits concepts regularly.

Students develop readiness by using hands-on activities and establishing links between past experiences and exploration of new concepts. Concepts are developed and practiced through shared discussion, cooperative learning and games.

The program insures on-going review throughout the year utilizing repeated exposures, daily routines and informal assessments.

A major component of the first grade math program is the home and school connection. Home Links, family letters, and practical math applications facilitate home/school interaction.

AREAS OF STUDY:

Numeration
Operations and Computation
Patterns, Functions and Algebra
Geometry
Measurement
Reference Frames
Data and Chance

CURRICULUM WRITING TEAM:

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DATE OF REVISION:

2002

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1

PA Standard: 2.1.3.A
2.1.3.B

Topics:	Skills:
Numbers	Counting
Activities:	Performance Assessments:
Number line Counting games Counting activities that use varying rhythms, clapping and tapping Counting concrete objects (e.g., eyes, fingers, chairs, etc) Tally count Dot to dots Calendar activities	Teacher observations Oral questions Checklists Class projects Textbook tests Homework assignments Journals Performance tasks Portfolios Diagnostic/prescriptive interview Anecdotal notes Classroom participation

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1

PA Standard: 2.1.3.C

2.1.3.D

2.1.3.E

Topics: Numbers Equivalent forms	Skills: Write fractions Compare fractions
Activities: Fraction museum Write fractions to label fractional parts Use fraction strips to compare fractions Look for objects that are divided into equal parts Fold squares and color various fractional parts Explore fractions by partitioning regions into $\frac{1}{2}$, $\frac{1}{2}$ and $\frac{1}{4}$ using slates, paper crackers and geoboards Equivalent names and name collection boxes Pan balance to demonstrate equivalence	Performance Assessments: Teacher observations Oral questions Checklists Class projects Textbook tests Homework assignments Journals Performance tasks Portfolios Diagnostic/prescriptive interview Anecdotal notes Classroom participation

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1

PA Standard: 2.1.3.F
2.1.3.G

Topics:	Skills:
Money	Identify penny, nickel, dime
Activities:	Performance Assessments:
Use real money for coin identification and counting Count and compare money amounts Coin "grab" games Penny/nickel/dime exchange games Count by 10's, 5's, 1's, using combinations of dimes, nickels, and pennies One-dollar exchange to practice exchanging penny/dime and dime/dollar exchanges Record value of coin combination using slate activities Activities using store and vending poster charts	Teacher observations Oral questions Checklists Class projects Textbook tests Homework assignments Journals Performance tasks Portfolios Diagnostic/prescriptive interview Anecdotal notes Classroom participation

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1

PA Standard: 2.1.3.H

Topics: Numbers	Skills: Counting Skip counting Identify odd and even numbers
Activities: Skip counting by 2's, 3's, 5's, and 10's Odd and even numbers Frames and arrows Predict patterns (what's my rule?) Use simple concepts of negative numbers on a number line (in counting temperature, etc.)	Performance Assessments: Teacher observations Oral questions Checklists Class projects Textbook tests Homework assignments Journals Performance tasks Portfolios Diagnostic/prescriptive interview Anecdotal notes Classroom participation

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1

PA Standard: 2.1.3.I

Topics:	Skills:
Number relationships	Tally counting Identify place value Identify relational symbols $>$ $<$ $=$
Activities:	Performance Assessments:
Numbers All Around Museums Counters Tally marks Dominoes Base-ten blocks Bundle craft sticks 100 th day projects Introduce relational symbols $>$ $<$ $=$ Play TOP-IT with symbol cards and animal cards Pan balance using $>$ $<$ $=$ Before/after/in between and number cards	Teacher observations Oral questions Checklists Class projects Textbook tests Homework assignments Journals Performance tasks Portfolios Diagnostic/prescriptive interview Anecdotal notes Classroom participation

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1

PA Standard: 2.1.3.J
2.1.3.K

Topics:	Skills:
Number relationships	Identify place value Write numbers 0-100 Use a calculator to enter numbers
Activities:	Performance Assessments:
Number line games Enter numbers on calculator Calendar activities Write numbers 0 – 100 Random counting activities Base ten block relationships Bundle craft sticks into 10's, 10's into hundreds Discuss the role of place in the value of digits Base ten block exchanges between longs and cubes Name two and three digit numbers represented by base 10 blocks Place value work mats Egg carton digit game 100 th day project Apple math project Pumpkin math project	Teacher observations Oral questions Checklists Class projects Textbook tests Homework assignments Journals Performance tasks Portfolios Diagnostic/prescriptive interview Anecdotal notes Classroom participation

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1

PA Standard: 2.1.3.L
2.1.3.M

Topics:	Skills:
Numbers	To practice addition and subtraction
Activities:	Performance Assessments:
Fact triangles Dominoes Fact family activities Addition/subtraction TOP-IT	Teacher observations Oral questions Checklists Class projects Textbook tests Homework assignments Journals Performance tasks Portfolios Diagnostic/prescriptive interview Anecdotal notes Classroom participation

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1

PA Standard: 2.2.3.A

Topics:	Skills:
Computation	Identify fact families
Activities:	Performance Assessments:
<ul style="list-style-type: none"> Color by number pictures to practice facts Broken calculator game Add/subtraction fact families: use dominoes and fact triangles Turn around facts Choral responses Shaker addition Beat the calculator Fact power game What's my rule? Game School store mini posters Number line and number grids Act out and solve number stories Illustrate and solve number stories Stories using simple drawings and concrete counters Share solution strategies for number stories Two-fisted penny game Dice games Parts and total diagrams for domino dot totals 	<ul style="list-style-type: none"> Teacher observations Oral questions Checklists Class projects Textbook tests Homework assignments Journals Performance tasks Portfolios Diagnostic/prescriptive interview Anecdotal notes Classroom participation

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1

PA Standard: 2.2.3.B
2.2.3.C

Topics:	Skills:
Estimation	Estimate Discussion
Activities:	Performance Assessments:
Estimate various theme-related collections (pumpkin, apple projects) Orally discuss reason for estimation	Teacher observations Oral questions Checklists Class projects Textbook tests Homework assignments Journals Performance tasks Portfolios Diagnostic/prescriptive interview Anecdotal notes Classroom participation

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1

PA Standard: 2.3.3.A

Topics: Measurement and estimation	Skills: Compare length of objects to ruler Order objects from shortest to longest Measure students heights Compare capacities of three containers Estimate time shown on an hour hand only clock Show and tell time to the nearest hour Estimate duration of a minute Time lines
Activities:	Performance Assessments: Teacher observations Oral questions Checklists Class projects Textbook tests Homework assignments Journals Performance tasks Portfolios Diagnostic/prescriptive interview Anecdotal notes Classroom participation

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1

PA Standard: 2.3.3.B

Topics: Measurement and estimation	Skills: Measure and compare using non-standard units (body parts) Measure with personal foot and standard foot Measure to nearest inch Measure with ruler and tape measure Measure and draw line segments of specified lengths in inches and centimeters Measure students heights Measure classroom items with tape measure and/or meter sticks
Activities:	Performance Assessments: Teacher observations Oral questions Checklists Class projects Textbook tests Homework assignments Journals Performance tasks Portfolios Diagnostic/prescriptive interview Anecdotal notes Classroom participation

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1

PA Standard: 2.3.3.C

Topics:	Skills:
Calendar	Identify months Identify days
Activities:	Performance Assessments:
Daily calendar routine Make own calendar	Teacher observations Oral questions Checklists Class projects Textbook tests Homework assignments Journals Performance tasks Portfolios Diagnostic/prescriptive interview Anecdotal notes Classroom participation

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1

PA Standard: 2.3.3.D

Topics:	Skills:
Time	Identify hour hand Identify minute hand Tell time to nearest hour and half hour
Activities:	Performance Assessments:
Make a clock Estimate time shown on an hour hand only clock Compare hour and minute hands on analog clocks Show and tell time to the nearest hour and half hour Estimate duration of a minute Write times on clock faces Tell time to the quarter hour Introduce digital clocks and digital time notation Introduce five minute interval marks on the analog clock Record time	Teacher observations Oral questions Checklists Class projects Textbook tests Homework assignments Journals Performance tasks Portfolios Diagnostic/prescriptive interview Anecdotal notes Classroom participation

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1

PA Standard: 2.3.3.E

Topics:	Skills:
Comparison	Use terms of comparison
Activities:	Performance Assessments:
Compare objects using terms same, longer, shorter, heavier, lighter, warmer, colder, wider, narrower, and degrees of volume Compare capacities of three containers	Teacher observations Oral questions Checklists Class projects Textbook tests Homework assignments Journals Performance tasks Portfolios Diagnostic/prescriptive interview Anecdotal notes Classroom participation

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1

PA Standard: 2.3.3.F

Topics:	Skills:
Estimation	Compare measurements using body parts
Activities:	Performance Assessments:
Estimate, measure and compare lengths using body parts Measure with personal foot	Teacher observations Oral questions Checklists Class projects Textbook tests Homework assignments Journals Performance tasks Portfolios Diagnostic/prescriptive interview Anecdotal notes Classroom participation

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1

PA Standard: 2.4.3.A

Topics:	Skills:
Mathematical reasoning	Estimate using base 10 cubes Order objects by weight Use terms greater than, less than
Activities:	Performance Assessments:
Estimate area using base 10 cubes – verify Use a pan balance to compare weights Order objects by weight using a spring scale Use animal weights poster and base 10 blocks to represent the weight of the animals Verify the total weight of two animals by using base 10 blocks Cover shapes with pattern blocks Compare numbers using greater than, less than, and equal to Compare sums with addition TOP-IT, Shaker TOP-IT, and number cards	Teacher observations Oral questions Checklists Class projects Textbook tests Homework assignments Journals Performance tasks Portfolios Diagnostic/prescriptive interview Anecdotal notes Classroom participation

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1

PA Standard: 2.4.3.B

Topics:	Skills:
Time	Record temperatures Record day of school year Measure inches and feet
Activities:	Performance Assessments:
Daily temperature recording Calendar activities Pictorial clock references for daily schedule Record each day of the school year using straws, money, or base ten blocks Collect and record attendance data Use tape measure to record student heights and theme projects (e.g., pumpkin math, apple math)	Teacher observations Oral questions Checklists Class projects Textbook tests Homework assignments Journals Performance tasks Portfolios Diagnostic/prescriptive interview Anecdotal notes Classroom participation

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1

PA Standard: 2.5.3.A

2.5.3.B

2.5.3.C

Topics:	Skills:
Mathematical problem solving	Create charts and graphs to solve problems Discuss solutions
Activities:	Performance Assessments:
<p>Students share solution</p> <p>Strategies (e.g., number line hopping, number grid pattern, counting on, counting backwards)</p> <p>Use pictures and manipulatives to solve problems</p> <p>Collect and explore data</p> <p>Use correct vocabulary and symbols (e.g., addition +, subtraction -, greater than >, less than <, equal to =)</p> <p>Use correct geometric terms</p> <p>Use concrete objects to solve problems</p> <p>Use mental math to solve problems</p> <p>Use number grid and number line as problem solving tools</p> <p>Act out and solve number stories</p> <p>Use words, numbers, pictures, charts, and graphs to solve problems</p>	<p>Teacher observations</p> <p>Oral questions</p> <p>Checklists</p> <p>Class projects</p> <p>Textbook tests</p> <p>Homework assignments</p> <p>Journals</p> <p>Performance tasks</p> <p>Portfolios</p> <p>Diagnostic/prescriptive interview</p> <p>Anecdotal notes</p> <p>Classroom participation</p>

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1

PA Standard: 2.6.3.A
2.6.3.B

Topics: Collecting data	Skills: Record data. Use appropriate terms – most, least, same, highest, lowest, more than, fewer than
Activities: Record daily weather on class weather chart Record daily temperature (on color code thermometer poster) Collect data (student pets and dice roll, etc.) Record data with tally marks Record tally data on bar graph or pictograph Use the terms most, least, same, highest, lowest, more than and fewer than to interpret data on a graph	Performance Assessments: Teacher observations Oral questions Checklists Class projects Textbook tests Homework assignments Journals Performance tasks Portfolios Diagnostic/prescriptive interview Anecdotal notes Classroom participation

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1

PA Standard: 2.6.3.C
2.6.3.D

Topics:	Skills:
Data analysis	Recording Analyzing Predicting
Activities:	Performance Assessments:
Ongoing daily weather recording and ongoing daily temperature recording (compare monthly data for temperature and weather September through June) Analyze data: heights of students beginning and end of year Predict outcomes of dice roll Predicts head and tails of coin toss	Teacher observations Oral questions Checklists Class projects Textbook tests Homework assignments Journals Performance tasks Portfolios Diagnostic/prescriptive interview Anecdotal notes Classroom participation

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1

PA Standard: 2.7.3.A
2.7.3.B
2.7.3.C
2.7.3.D

Topics:	Skills:
Probability and predictions	<p>Discussion of events (coin toss, dice roll, weather) using the terms likely, unlikely or certain</p> <p>Use terms sure, probably, 50/50, possible, forecast and predict to discuss chance events</p>
Activities:	Performance Assessments:
<p>Coin toss</p> <p>Dice roll</p> <p>Use everyday math deck for random outcomes</p> <p>Make and use an unfair spinner (e.g., 1/2 red, 1/4 blue, 1/4 green)</p> <p>Make an use a fair spinner (2 (1/2)s or 4 (1/4)s</p> <p>Generate games using fair and unfair spinners</p> <p>Grow a plant from a bulb or seed and predict and graph the plants' growth (use amaryllis, green beans, or sunflowers for rapid growth)</p> <p>Collect, record, and display favorite color data</p> <p>Collect, record and display student height data</p> <p>Collect, record, and display dice roll data</p> <p>Record frequency of sums on dice roll</p>	<p>Teacher observations</p> <p>Oral questions</p> <p>Checklists</p> <p>Class projects</p> <p>Textbook tests</p> <p>Homework assignments</p> <p>Journals</p> <p>Performance tasks</p> <p>Portfolios</p> <p>Diagnostic/prescriptive interview</p> <p>Anecdotal notes</p> <p>Classroom participation</p>

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1

PA Standard: 2.8.3.A
2.8.3.B

Topics:	Skills:
Algebra	Patterning
Activities:	Performance Assessments:
Collect, record and display favorite color data Collect, record and display student height data Collect, record and display dice roll data Record frequency of sums on dice roll Identify shapes of attribute blocks, make attribute block designs Number grid puzzles and patterns Sort attribute blocks Build and extend pattern block designs What's my rule? And frames and arrows Create a patterns museum Build and extend popsicle stick patterns	Teacher observations Oral questions Checklists Class projects Textbook tests Homework assignments Journals Performance tasks Portfolios Diagnostic/prescriptive interview Anecdotal notes Classroom participation

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1

PA Standard: 2.8.3.C
2.8.3.D
2.8.3.E
2.8.3.F
2.8.3.G

Topics:	Skills:
Algebra	<ul style="list-style-type: none"> Patterning Finding number patterns Identify a missing addend Show inequalities and equalities Write number models using +, -, >, <, = to represent simple number stories Solve number sentences
Activities:	Performance Assessments:
<ul style="list-style-type: none"> Parts and total dominoes for domino dot totals Dice rolls to generate number sentences Two-fisted penny grab Colored chips (counters) Objects on flannel board Use manipulatives to determine a missing addend in a number sentence (domino patterns, counting on, patterns and total diagrams for domino dot totals) Prepare for function machines; e.g., magic bag games Act out and solve number stories Illustrate and solve number stories using cut-out pictures, simple drawings and concrete counters Penny grab Dominoes Pan balance to show inequalities and equalities 	<ul style="list-style-type: none"> Teacher observations Oral questions Checklists Class projects Textbook tests Homework assignments Journals Performance tasks Portfolios Diagnostic/prescriptive interview Anecdotal notes Classroom participation

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1

PA Standard: 2.8.3.H

2.8.3.I

2.8.3.J

Topics: Algebra	Skills: Collect data Record data Solve number facts Write number models for simple number stories
Activities: Collect, record and display data on a bar graph and pictograph Collect, record and display student height data Collect, record and display dice roll data Record frequency of sums on dice roll Solve number facts Write number models for simple number stories Number grid puzzles Addition and subtraction using a number grid	Performance Assessments: Teacher observations Oral questions Checklists Class projects Textbook tests Homework assignments Journals Performance tasks Portfolios Diagnostic/prescriptive interview Anecdotal notes Classroom participation

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1

PA Standard: 2.9.3.A
2.9.3.B
2.9.3.C
2.9.3.D

Topics:	Skills:
Geometry	<ul style="list-style-type: none"> Draw shapes Discuss characteristics of shapes and patterns Classify shapes
Activities:	Performance Assessments:
<ul style="list-style-type: none"> Use pattern block templates to draw shapes Discuss names and characteristics of pattern block shapes and template shapes Shapes museum Explore with geoboards Construct polygons out of straws and twist ties Use pattern block templates to practice drawing shapes Connect line segment with rulers Use pattern block templates to practice drawing shapes Use pattern blocks to draw two-dimensional geometric shapes Make shapes on geoboards and record on dot paper Connect line segments with rulers to create shapes Shapes museum Classify items in shapes museum Find shapes in the classroom 	<ul style="list-style-type: none"> Teacher observations Oral questions Checklists Class projects Textbook tests Homework assignments Journals Performance tasks Portfolios Diagnostic/prescriptive interview Anecdotal notes Classroom participation

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1

PA Standard: 2.9.3.E
2.9.3.F
2.9.3.G
2.9.3.H

Topics:	Skills:
Geometry	Identify symmetry
Activities:	Performance Assessments:
<p>Symmetry cutting and folding</p> <p>Create a symmetric design using pattern blocks</p> <p>Construct two and three-dimensional shapes with straws and twist ties and toothpicks and marshmallows</p> <p>Cut and fold symmetrical figures</p> <p>Create and fold symmetrical design using pattern blocks</p> <p>Find symmetrical images in classroom</p> <p>Use mirrors to complete the pictures on symmetry cards</p> <p>Complete a design so that the two halves will match</p> <p>Use pattern blocks to create a mirror image</p> <p>Use pattern blocks to divide shapes into two equal parts</p> <p>Discuss fractional relationships among pattern block shapes</p> <p>Discuss relationships between figures using reflections</p>	<p>Teacher observations</p> <p>Oral questions</p> <p>Checklists</p> <p>Class projects</p> <p>Textbook tests</p> <p>Homework assignments</p> <p>Journals</p> <p>Performance tasks</p> <p>Portfolios</p> <p>Diagnostic/prescriptive interview</p> <p>Anecdotal notes</p> <p>Classroom participation</p>

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1

PA Standard: 2.9.3.I

Topics:	Skills:
Geometry	Enlarge a shape
Activities:	Performance Assessments:
Use pattern blocks to replicate a larger shape Tangrams Make and create designs using template shapes	Teacher observations Oral questions Checklists Class projects Textbook tests Homework assignments Journals Performance tasks Portfolios Diagnostic/prescriptive interview Anecdotal notes Classroom participation

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1

PA Standard: 2.10.3.A

Topics:	Skills:
Trigonometry	Identify polygons Identify right angles
Activities:	Performance Assessments:
Construct polygons out of straws and twist ties Create a shapes museum Investigate relationships and properties of polygons with geoboards Identify right angles in the environment Construct and discuss squares, triangles, and rectangles using geoboards Build shapes with marshmallows and toothpicks	Teacher observations Oral questions Checklists Class projects Textbook tests Homework assignments Journals Performance tasks Portfolios Diagnostic/prescriptive interview Anecdotal notes Classroom participation

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1

PA Standard: 2.10.3.B

Topics:	Skills:
Trigonometry	Identify three-dimensional shapes Classify items by shape
Activities:	Performance Assessments:
Geoboards Discuss faces of solid shapes Find three-dimensional shapes that have something in common with the teacher displayed shapes Classify items in the shapes museum	Teacher observations Oral questions Checklists Class projects Textbook tests Homework assignments Journals Performance tasks Portfolios Diagnostic/prescriptive interview Anecdotal notes Classroom participation

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1
PA Standard: 2.11.3.A
 2.11.3.B

Topics:	Skills:
Calculus	Compare greater than/less than stories Put weights in order Write number models for number stories
Activities:	Performance Assessments:
Number squeeze Put animal weight cards in order. Write number models for number stories Play "TOP IT" with relation words and symbols Fill in a 100 number grid Count forward and count backward on the number line Greater than/less than number stories Number scrolls	Teacher observations Oral questions Checklists Class projects Textbook tests Homework assignments Journals Performance tasks Portfolios Diagnostic/prescriptive interview Anecdotal notes Classroom participation

Wallenpaupack Area School District

Course: Mathematics

Grade Level: Grade 1
PA Standard: 2.11.3.C
 2.11.3.D
 2.11.3.E

Topics:	Skills:
Calculus	Create number stories using pictures or graphs Interpret graphs Find patterns on a number line or grid (skip-counting, etc.)
Activities:	Performance Assessments:
Record daily temperature using color code Compare classroom height/growth Leaf project (sort and graph varieties of leaves) Make classroom graphs comparing pets, favorite color, foods, etc. Beat the calculator "Timing Me" activities-students time each other on various activities- how far can you count in one minute, how many times can you jump/clap in one minute, etc. Explore various ways to count seconds-clap, one-mississippi, 1001, 1002, etc. Attribute train game Popsicle stick patterns Animal weight cards Patterns museum Calculator counts Frames and arrows Function machine activities	Teacher observations Oral questions Checklists Class projects Textbook tests Homework assignments Journals Performance tasks Portfolios Diagnostic/prescriptive interview Anecdotal notes Classroom participation