

**WEST JEFFERSON HILLS SCHOOL DISTRICT
MATHEMATICS**

GRADE KINDERGARTEN

PA Academic Standards Student must be able to do	Objective Content or process student will be able to know and do	Instructional Methods	Materials/ Resources Textbooks, trade books, workbooks, software, hardware, etc.	*Assessment Procedures *Additional adaptations, modifications, accommodations, and enrichment/ acceleration will be provided per IEP	*Additional Learning Opportunities for students who do not meet basic standards *Additional adaptations, modifications, and accommodations will be provided per IEP	*Extended Learning Opportunities for students who can go beyond the basic standards. *Additional enrichment/acceleration will be provided per IEP
<i>Pennsylvania's public schools shall teach, challenge and support every student to realize his or her maximum potential and to acquire the knowledge and skills needed to . . .</i>						
<ul style="list-style-type: none"> • 2.9 Geometry • 2.5 Mathematical Problem Solving and Communication 	<ul style="list-style-type: none"> • Identify the position top, middle, and bottom. • Identify the position in front and behind. • Identify the position over, under, and on. • Identify the position, inside and outside. • Identify left and right. 	<ul style="list-style-type: none"> • Model • Sing and Chant • Construct • Play Games • Illustrate • Read • Pair-Share • Cooperative Learning • Learning Activities • Participate • Play “Simon Says” • Stack blocks, cubes • Identify position in line • Position objects • Play “follow the leader” • Use flannel board, pieces to show over, under, on • Read aloud (books dealing with positional words) 	<ul style="list-style-type: none"> • Blocks and Cubes • Art Supplies • Flannel Board • Jump Ropes • Large Ball • Hula Hoop • Problem of Day 	<ul style="list-style-type: none"> • Teacher Observation • Student Project • Observational Checklist • Role-Playing • Anecdotal Comments • Group Project • Parental Report • Written Test • Other • Individual Assessments for Special Needs Children 	<ul style="list-style-type: none"> • Step over, under, on jump ropes positioned in classroom • Play basketball game – tell if ball lands inside or outside waste basket • “I Can” Jumbo Book 	<ul style="list-style-type: none"> • Create ocean mural drawing objects over, under, on water • Cut out pictures of animals that live inside a home and those that must live outside, and place accordingly • Illustrate and label three parts of a tree • Problem of the Day • Teacher reads “The Mitten” and children place animals inside the mitten

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		<ul style="list-style-type: none"> • Step inside, outside hula hoop • Sing songs dealing with positional words Recite poems				

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<ul style="list-style-type: none"> • 2.6 Statistics and Data Analysis • 2.7 Probability and Predictions • 2.8 Algebra and Functions • 2.9 Geometry 	<ul style="list-style-type: none"> • Sort by color, size, shape and type • Sort objects (counters, blocks, crayons, buttons, etc. by color, size, and shape) 	<ul style="list-style-type: none"> • Model • Sing and Chant • Play Games • Read • Pair-Share • Cooperative Learning • Learning Activities • Manipulate • Art Activities • Sort objects (counters, blocks, crayons, buttons, etc. by color, size, and shape) 	<ul style="list-style-type: none"> • Assorted objectives – teddy bear counters, buttons, crayons, leaves, fruit • Sorting box • Problem of the day 	<ul style="list-style-type: none"> • Teacher observation • Peer observation • Student project • Observational checklist • Anecdotal comments • Group project • Parental report • Written test • Other • Individual assessments for special needs children 	<ul style="list-style-type: none"> • Sorting Box • Teacher places three different colored flannel pieces on flannel board. Children match given flannel pieces. • Use sorting rings to sort shapes by size, shape, and color 	<ul style="list-style-type: none"> • Brainstorm new ways to sort • Play “Secret Sort” (teacher sorts children or objects by various attributes. (Children determine sorting rule.) • Problem of the Day

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<ul style="list-style-type: none"> • 2.8 Algebra • 2.9 Geometry • 2.7 Probability and Predictions • 2.5 Mathematical Problem Solving and Communication • 2.6 Statistics and Data Analysis 	<ul style="list-style-type: none"> • Identify, copy, extend and create patterns. 	<ul style="list-style-type: none"> • Model • Sing and Chant • Read • Pair-share • Cooperative Learning • Learning Activities • Manipulate • Illustrate • Construct • Copy and extend rhythm and movement activities. • Construct color patterns with connecting cubes and beads. • Clap, chant, and act out patterns. • Create patterns using objects and available materials in the classroom 	<ul style="list-style-type: none"> • Beads, patterns, cards • Problem of the Day • Computer • Sponges, paint • Pegs, pegboards, pattern cards • Assorted collectibles • Connecting cubes, job cards 	<ul style="list-style-type: none"> • Teacher observation • Peer observation • Student project • Observational checklist • Role-playing • Anecdotal comments • Group project • Parental report • Written test • Other 	<ul style="list-style-type: none"> • Make people patterns • Make a two-color snap cube pattern 	<ul style="list-style-type: none"> • Create shape patterns on computer • Use assorted collectibles, create patterns, clue on pattern strips – make “Class Pattern Book” • Problem of the Day • Sponge paint patterns • Use Learning Links and Job Cards to copy, extend patterns
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<ul style="list-style-type: none"> • 2.8 Algebra • 2.9 Geometry • 2.6 Statistic and Data Analysis • 2.5 Mathematical Problem Solving and Communication • 2.4 Mathematical Reasoning and Connections 	<ul style="list-style-type: none"> • Identify geometric shapes • Identify flat and 3D geometric shapes. 	<ul style="list-style-type: none"> • Play games • Model • Sing and Chant • Read • Pair-share • Learning Activities • Manipulate • Illustrate • Construct • Cooperative Learning • Distribute circles, triangles, squares and rectangles. Children find objects in classroom having same shapes. Draw objects. • Make clay shapes. • Sort attributes shapes, placing rectangles on one sheet and triangles on another. • Sing songs. • Build with blocks and geometric solids 	<ul style="list-style-type: none"> • Variety of shapes • Clay, sand • Blocks, geometric solids • Problem of the Day 	<ul style="list-style-type: none"> • Teacher observation • Peer observation • Student project • Observational checklist • Anecdotal comments • Parental report • Written test • Other 	<ul style="list-style-type: none"> • Trace shape in sand • Play "I Spy" • Have children arrange selves into geometric shapes • Use variety of shapes to make shape pictures 	<ul style="list-style-type: none"> • Give partners paper bag with shapes – use sense of touch to guess shape • Cooperative groups create shape mobile • Make "Shape Robots" using variety of materials

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<ul style="list-style-type: none"> • 2.1 Numbers, Number System and Number Relationships • 2.5 Mathematical Problem Solving and Communication • 2.4 Mathematical Reasoning and Connections 	<ul style="list-style-type: none"> • Recognize numerals 0-30 • Count using one-to-one correspondence (sets to 10) • Count by rote to 20 	<ul style="list-style-type: none"> • Model • Pair-shared • Play games • Learning Activities • Read stories • Illustrate • Sing and chant • Construct number activities • Calendar Activities • Cooperative Learning • Art Activities • Chant or sing various songs or poems related to numbers • Read stories • Count to 10 in World, Language • Flannel board activities for 1 to 1 correspondence • Count objects using counters • Practice rote counting by using the calendar 	<ul style="list-style-type: none"> • Spinners • Numeral cards • Counters • Number related literature • Art supplies • Computer Related Software • Problem of the Day • Calendar Activities • Number Bingo game 	<ul style="list-style-type: none"> • Teacher observation • Peer observation • Student project • Observational checklist • Role-playing • Anecdotal comments • Group projects • Parental report • Written test • Alternative Assessment • Other 	<ul style="list-style-type: none"> • Children to glue assorted materials on number cards 0 to 10 • Make clay numerals 0 to 10 • Use counters to develop sets 1 to 10 • Children work in pairs to count with each other • Bingo game 	<ul style="list-style-type: none"> • Create a number line 1 to 10 • Computer Activities • Problem of the Day • Use counters to develop sets 1 to 20 • Children work in pairs to count with each other • Make numeral books set to 10 • Bingo game

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<ul style="list-style-type: none"> • 2.1 Numbers, Number Systems and Number Relationships • 2.4 Mathematical Reasoning and Connections 	<ul style="list-style-type: none"> • Recognize and use a calendar 	<ul style="list-style-type: none"> • Manipulate • Model • Read • Name days of the week, current month and date, using daily calendar routine • Use calendar to reinforce concept of yesterday, tomorrow, numbers before and after • Read, sing "Today is Monday" by Eric Carie • Clap, etc. count daily numbers for current date • Children count—off numbers in class group 	<ul style="list-style-type: none"> • Calendar • Hundreds chart 	<ul style="list-style-type: none"> • Teacher observation • Student project • Observational checklist • Interview • Anecdotal comments • Student self-assessment • Group project • Parental report • Written test • Daily calendar activities • Other 	<ul style="list-style-type: none"> • Practice counting with partner • Count while bouncing ball 	<ul style="list-style-type: none"> • Celebrate day 100 of school with various activities: ~ Count 100 pennies ~ Take 100 foot steps ~ Bring sets of 100 objects from home ~ Record number of school days on hundreds chart ~ Make special hat or badge displaying number 100

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<ul style="list-style-type: none"> • 2.1 Number, Number Systems and Number Relationships • 2.2 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 	<ul style="list-style-type: none"> • Recognize sequence of events • To tell time to the hour on a digital clock and on an analog clock 	<ul style="list-style-type: none"> • Model • Pair-share • Read • Illustrate • Learning Activities • Construct • Cooperative learning • Art activities • Put sequence cards in order • Order events in a school day • Create the third part of a story sequence • Read and show the time on digital and analog clocks 	<ul style="list-style-type: none"> • Judy Clock • Student Clocks • Sequence Cards • Digital Clock • Art paper • Computer Related Software • Related Literature 	<ul style="list-style-type: none"> • Teacher observation • Student project • Observation checklist • Role-playing • Anecdotal comments • Group projects • Parental report • Written test • Other 	<ul style="list-style-type: none"> • To arrange events in a logical sequence • To find and read time on a digital and analog clock • To use hand made clock faces to tell time to the hour 	<ul style="list-style-type: none"> • Problem of the day • Identify the time on a clock to the time of day • Read “Grouchy Ladybug” by Eric Carle

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<ul style="list-style-type: none"> • 2.2 Computation and Estimation • 2.4 Mathematical Reasoning and Connections • 2.5 Mathematical Problem Solving and Communication 	<ul style="list-style-type: none"> • Identify and compare equal and unequal parts • Identify halves 	<ul style="list-style-type: none"> • Model • Read • Illustrate • Learning Activities • Construct art activities • Estimate, then use connecting cubes to measure lengths of hands, feet etc. • Estimate, then measure small toys with paper clips • Estimate, then measure how many children's footprints are needed to get from place to place • Identify equal parts and one-half (1/2) 	<ul style="list-style-type: none"> • Large paper shape • Multilink cubes • Cookies, cheese or any snack that can be divided into equal parts • Books • Art supplies • Pattern blocks • Picture cards of foods showing equal and unequal parts 	<ul style="list-style-type: none"> • Teacher observation • Observation checklist • Role-playing • Anecdotal comments • Group projects • Parental report • Written test • Other 	<ul style="list-style-type: none"> • Give child a train that is five connecting cubes long, have child find another object in the classroom the same length as the train 	<ul style="list-style-type: none"> • Select appropriate tool to measure small or large room objects • Children work in pairs to measure length of room or hallway using yardsticks • Estimate, then measure how far 100 children's footprints will lead them outside the classroom • Children make drawing, then estimate number of construction paper squares needed to frame picture; complete frame • Problem of the Day

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