New Paltz Central School District

Mathematics
Kindergarten

TIME	CONTENT	SKILLS	ASSESSMENTS
September	**UNIT 1: Introduction to Math Materials and Routines** • What is math? --- • Counting – one to one correspondence • Representing number	• Verbally count by 1's to 20 • Record numerical information • Develop a sense of time (day, weeks) • Connect number names, numerals, and quantities • Collect data that falls into two groups • Count and compare quantities	• Teacher observation • Begin End-of-Year Benchmark Assessment
October - November	**UNIT 2: Patterns** • What is a pattern? • How do we know if there is a pattern? • Where do we find patterns? --- • Creating a pattern • Extending a pattern • Identifying the unit of a pattern	• Observe and describe attributes • Recognize and describe a pattern • Create and extend patterns • Predict what comes next in a pattern • Read and record patterns • Identify the unit of a pattern • Interpret a pattern using physical movements • Represent a physical pattern using materials • Make a linear pattern in a rectangular frame • Make and compare patterns that use the same two variables (of color) • Copy, build, and extend patterns that grow (or shrink) in some regular and predictable way • Determine a rule for how a pattern grows (or shrinks)	• Patterns unit assessment • Teacher observation • Student discussion

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December - January	**<u>UNIT 3: Number and Numeration</u>** • Why do we count things? • Why do we measure things? --- • Counting • Developing number sense • Measuring (linear)	• Recognize numerals and number names to 10 • Connect numerals to the quantities they represent • Create a set of a given size • Represent quantities with pictures, numerals, or words • Develop strategies for counting and keeping track of quantities • Develop and use language to describe and compare lengths • Measure by direct comparison • Count groups (sets) of objects • Compare quantities to determine which is more • Keep track of the size of a growing collection • Use appropriate language to describe and compare amounts • Order quantities from least to most and most to least • Represent mathematical work • Solve a problem with many possible solutions	• Number and Numeration unit assessment • Teacher observation • Student discussion

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February - March	**<u>UNIT 4: Data Collection</u>** • How do we collect data? • How can we represent data? --- • Sorting and classifying data • Representing data	• Develop and use strategies for counting • Relate counting to the quantity of items in a group • Use one-to-one correspondence • Explore two-to-one correspondence • Represent data in a variety of ways • Look at different representations of the same data set • Sort objects into groups by attribute • Describe categories for a sort • Sort a set of objects in more than one way • Note similarities and differences in related objects • Compose survey questions • Gather and record survey data • Compare the sizes of different groups in a survey • Make sense of the data representations • Solve a mathematical problem based on data • Build a model or make a representation to explain a problem-solving strategy • Count and compare sets of objects or people	• Data Collection unit assessment • Teacher observation • Student discussion

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March - April	**<u>UNIT 5: Geometry</u>** • What shapes do you see around you? --- • Familiarity with attributes of 2-D and 3-D shapes	• Observe and describe two-dimensional shapes • Develop vocabulary to describe 2-D and 3-D shapes • Become familiar with the names of 2-D and 3-D shapes (circle, square, rectangle, triangle, sphere, pyramid, cube, rectangular prism) • Describe and become familiar with the attributes of 2-D shapes • Relate 2-D shapes to real world objects • Construct 2-D shapes • Find combinations of shapes that fill in a given area • Build knowledge about the relationships among pattern block shapes • Relate a 3-D object to a 2-D picture of its geometric shape • Picture the shape that will fit a particular space or design • Visualize how a shape needs to be moved or turned in order to fit into a particular space or design • Describe position of and spatial relationships among objects • Look at 3-D objects as wholes and as having parts • Observe similarities and differences between the faces of different 3-D shapes	• Geometry unit assessment • Teacher observation • Student discussion

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May - June	**<u>UNIT 6: Number Sense and Operations</u>** • Why do we count things? --------- • Strategies for combining and separating numbers	• Count up to 20 objects • Represent quantities with pictures, numbers, and words • Repeat a nonstandard measure to quantify length • Become familiar with number combinations to 10 • Record a number of objects grouped using different strategies • Determine the larger of two amounts, up to 20 • Make sense of stories that involve combining and separating by acting them out and retelling them • Develop strategies for solving combining and separating story problems • Find the total of two quantities, up to 20 • Find the total of two or more single-digit numbers • Use pictures, numbers, and words to record solutions to a problem • Find combinations of numbers to 10	• Number Sense and Operations unit assessment • End-of-Year Benchmark assessment • Teacher Observation • Student discussion