MathWorks
Mathematics
Correlation
Kindergarten

SCHOLASTIC Education®

Overall Expectations	Big Book Connections	Resource Unit Connections
A. demonstrate an understanding of number, using concrete materials to explore and investigate counting, quantity, and number relationships	How Many? More or Less? Adding Animals It's Time! Measuring Up What's the Shape? Who Wears Shoes?	
B. measure and compare length, mass, capacity, area, temperature of objects/materials, and the passage of time, using non-standard units, through free exploration, focused exploration, and guided activity	What Comes Next? Short, Tall, Big or Small Measuring Up It's Time!	
C. describe, sort, classify, and compare two-dimensional shapes and three-dimensional figures, and describe the location and movement of objects through investigation	What's the Shape? What Comes Next? Up, Down, All Around Short, Tall, Big or Small	
D. explore, recognize, describe, and create patterns, using a variety of materials in different contexts	What Comes Next? It's Time!	
E. sort, classify, and display a variety of concrete objects, collect data, begin to read and describe displays of data, and begin to explore the concept of probability in everyday contexts	Who Wears Shoes?	
Specific Expectations		
Number Sense and Numeration		
1. investigate the idea that quantity is greater when counting forwards and less when counting backwards (e.g., use manipulatives to create a quantity number line; move along a number line; move around on a hundreds carpet; play simple games on number-line game boards; build a structure using blocks, and describe what happens as blocks are added or removed) [A]* Student Talk: Initially "This is getting bigger." "Every time I add a block, my building gets taller." Eventually "We need three more blocks to finish the base."	How Many? Adding Animals	Unit 6: Counting to Ten Unit 13: Numbers and Counting Unit 17: Seeing Numbers, Making Ten Unit 18: Our Class Unit 19: More or Less Unit 20: Money Unit 23: Counting On, Counting Back Unit 25: Numbers to 20 Unit 27: Adding Groups Unit 28: Take Away Unit 32: Math Party
2. investigate some concepts of quantity through identifying and comparing sets with more, fewer, or	How Many? More or Less? Adding Animals	Unit 2: Making Groups Unit 3: Counting Groups Unit 6: Counting to Ten

the same number of objects (e.g., find out which of two cups contains more or fewer beans, using counters; investigate the ideas of more, less, and the same, using five and ten frames; compare two sets of objects that have the same number of items, one set having the items spread out, and recognize that both sets have the same quantity [concept of conservation]; recognize that the last count represents the actual number of objects in the set [concept of cardinality]; compare five beans with five blocks, and recognize that the number 5 represents the same quantity regardless of the different materials [concept of abstraction]) [A] Student Talk: "Let's count the cars. I have six and you have five. That means I have one more. Let's get another one so we can have the same." "You counted 35 buttons. I go even higher. I can count 40 buttons." Sample Problems: "Let's find out how many marbles I can hold in my hand. How many do you think? Let's count and see. How many marbles can you hold in your hand? Let's count. Do you have more or less than me?"		Unit 7: One, Two, Three, Four, Five Unit 8: Six, Seven, Eight, Nine, Ten Unit 13: Numbers and Counting Unit 16: Numbers Everywhere Unit 17: Seeing Numbers, Making Ten Unit 18: Our Class Unit 19: More or Less Unit 20: Money Unit 23: Counting On, Counting Back Unit 25: Numbers to 20 Unit 27: Adding Groups Unit 28: Take Away Unit 32: Math Party
3. recognize some quantities without having to count, using a variety of tools (e.g., dominoes, dot plates, dice, number of fingers) or strategies (e.g., composing and decomposing numbers, subitizing) [A] Teacher Prompts: "How did you know it was five? How did you figure out how many?" Student Responses: "I know it's five because it looks like the dice in my game." "It's five. I saw four red and one blue."	Adding Animals	Unit 3: Counting Groups Unit 8: Six, Seven, Eight, Nine, Ten Unit 13: Numbers and Counting Unit 27: Adding Groups Unit 28: Take Away
4. begin to use information to estimate the number in a small set (e.g., apply knowledge of quantity, use a common referent such as a five frame) [A] Student Talk: Initially "I think it will take three scoops to fill up the pail. …It took six." Eventually "I know that is not 100. A hundred is a lot and this is only a little bit." "I think there are more than five buttons because	More or Less?	Unit 3: Counting Groups Unit 8: Six, Seven, Eight, Nine, Ten Unit 13: Numbers and Counting Unit 19: More or Less Unit 32: Math Party

they wouldn't all fit on a five frame."		
5. use, read, and represent whole numbers to 10 in a variety of meaningful contexts (e.g., use a hundreds chart; use magnetic and sandpaper numerals; put the house number on a house built at the block centre; find and recognize numbers in the environment; use magnetic numerals to represent the number of objects in a set; write numerals on imaginary bills at the restaurant at the dramatic play centre) [A] Student Talk: Initially "I'm five years old. " Eventually (pointing to numbers in a book and reading them aloud to a classmate) "Five. There are five frogs on the log."	How Many? Adding Animals It's Time!	Unit 2: Making Groups Unit 3: Counting Groups Unit 6: Counting to Ten Unit 7: One, Two, Three, Four, Five Unit 8: Six, Seven, Eight, Nine, Ten Unit 13: Numbers and Counting Unit 16: Numbers Everywhere Unit 17: Seeing Numbers, Making Ten Unit 19: More or Less Unit 20: Money Unit 21: 1^{st}, 2^{nd}, 3^{rd} … Unit 25: Numbers to 20 (enrichment) Unit 27: Adding Groups Unit 28: Take Away Unit 29: Time of Day
6. use ordinal numbers in a variety of everyday contexts (e.g., line up toys and manipulatives, and identify the first, second, and so on; after reading a book, respond to the teacher's questions about who was the first or third person to come in the door; identify the first, seventh, or tenth person to arrive at school or in the group) [A]		Unit 21: 1^{st}, 2^{nd}, 3^{rd} …
7. demonstrate an understanding of number relationships for numbers from 0 to 10, through investigation (e.g., initially: show smaller quantities using anchors of five and ten, such as their fingers or manipulatives; eventually: show quantities to 10, using such tools as five and ten frames and manipulatives) [A] Student Talk: "I know there are seven counters because all of the ten frame is full except for three spaces." "I know there are seven counters because all of the five frame is full and there are two left over." Teacher Prompts: "Show me 3 on a five frame." "How do you know that it is 3?" "What comes in 5's [e.g., fingers, toes]?"	How Many? Adding Animals	Unit 2: Making Groups Unit 3: Counting Groups Unit 6: Counting to Ten Unit 7: One, Two, Three, Four, Five Unit 8: Six, Seven, Eight, Nine, Ten Unit 13: Numbers and Counting Unit 17: Seeing Numbers, Making Ten Unit 19: More or Less Unit 23: Counting On, Counting Back Unit 25: Numbers to 20 (enrichment) Unit 27: Adding Groups Unit 28: Take Away
8. investigate and develop strategies for composing and decomposing quantities to 10 (e.g., use manipulatives or "shake and spill" activities; initially: to represent the quantity of 8, the child may first count from 1 through to 8 using his or her fingers; later, the child may put up one hand, count from 1 to 5	Adding Animals	Unit 8: Six, Seven, Eight, Nine, Ten Unit 17: Seeing Numbers, Making Ten Unit 18: Our Class Unit 19: More or Less Unit 23: Counting On, Counting Back Unit 27: Adding Groups Unit 28: Take Away

using each finger, pause, and then continue to count to 8 using three more fingers; eventually: the child may put up all five fingers of one hand at once and simply say “Five”, then count on, using three more fingers and saying “Six, seven, eight. There are eight.”) [A] Student Talk: “I only have three wheels for my car. I need one more to make four.” “There are five people at the snow table but we only have three shovels. We need two more shovels.”		
9. explore different Canadian coins, using coin manipulatives (e.g., role-play the purchasing of items at the store at the dramatic play centre; determine which coin will purchase more – a loonie or a quarter) [A]		Unit 20: Money
10.demonstrate understanding of the counting concepts of stable order (that is, the concept that the counting sequence is always the same – 1 is always followed by 2, 2 by 3, and so on) and of order irrelevance (that is, the concept that the number of objects in a set will be the same regardless of which object is used to begin the counting) [A]	How Many? It’s Time!	Unit 2: Making Groups Unit 3: Counting Groups Unit 6: Counting to Ten Unit 7: One, Two, Three, Four, Five Unit 8: Six, Seven, Eight, Nine, Ten Unit 13: Numbers and Counting Unit 13: Numbers and Counting Unit 18: Our Class Unit 19: More or Less Unit 21: 1^{st}, 2^{nd}, 3^{rd} … Unit 23: Counting On, Counting Back Unit 25: Numbers to 20 (enrichment) Unit 29: Time of Day Unit 32: Math Party
11. begin to make use of one-to-one correspondence in counting objects and matching groups of objects (e.g., one napkin for each of the people at the table) [A] Sample Problems: “I am meeting with three children. I wonder how many chairs I will need.” “Show me how you know you need six cages for your lions.” Student Talk: “I counted five children. I need five pieces of apple, one for each child.”	How Many?	Unit 2: Making Groups Unit 3: Counting Groups Unit 6: Counting to Ten Unit 7: One, Two, Three, Four, Five Unit 8: Six, Seven, Eight, Nine, Ten Unit 13: Numbers and Counting Unit 18: Our Class Unit 19: More or Less Unit 21: 1^{st}, 2^{nd}, 3^{rd} … Unit 25: Numbers to 20 (enrichment) Unit 32: Math Party
12. investigate addition and subtraction in everyday activities through the use of manipulatives (e.g., interlocking cubes), visual models (e.g., a number line, tally marks, a hundreds carpet), or oral exploration (e.g., dramatizing of songs) [A] Sample Problems: “How can you use the five bear counters to tell a story about them going to the	Adding Animals	Unit 7: One, Two, Three, Four, Five Unit 8: Six, Seven, Eight, Nine, Ten Unit 17: Seeing Numbers, Making Ten Unit 18: Our Class Unit 19: More or Less Unit 20: Money Unit 23: Counting On, Counting Back Unit 27: Adding Groups Unit 28: Take Away

12. investigate addition and subtraction in everyday activities through the use of manipulatives (e.g., interlocking cubes), visual models (e.g., a number line, tally marks, a hundreds carpet), or oral exploration (e.g., dramatizing of songs) [A] Sample Problems: "How can you use the five bear counters to tell a story about them going to the woods?" "In our story, one more duck went into the pond. How many ducks are in the pond now? How do you know?"	Adding Animals	Unit 7: One, Two, Three, Four, Five Unit 8: Six, Seven, Eight, Nine, Ten Unit 17: Seeing Numbers, Making Ten Unit 18: Our Class Unit 19: More or Less Unit 20: Money Unit 23: Counting On, Counting Back Unit 27: Adding Groups Unit 28: Take Away
Measurement		
13. compare and order two or more objects according to an appropriate measure (e.g., length, mass, area, temperature, capacity), and use measurement terms (e.g., hot/cold for temperature, small/ medium/large for capacity, longer/ shorter or thicker/thinner for length) [B] Student Talk: "I lined the teddy bears up from shortest to tallest." "This book is heavier than 10 cubes." "We used 5 papers to cover the small table. It took us 15 papers to cover the big table."	What Comes Next? Short, Tall, Big or Small	Unit 4: Measuring Up Unit 11: Mass Unit 22: Length Unit 24: Capacity Unit 31: Math in the Sea
14. demonstrate, through investigation, an awareness of the use of different measurement tools for measuring different things (e.g., a balance is used for measuring mass, a tape measure for measuring length, a sandglass for measuring time) [B]	Measuring Up It's Time!	Unit 4: Measuring Up Unit 5: Time – Calendars Unit 11: Mass Unit 22: Length Unit 24: Capacity Unit 29: Time of Day Unit 31: Math in the Sea Unit 32: Math Party
15. demonstrate awareness of non-standard measuring devices (e.g., feet, hand spans, string, or cubes to measure length; hand claps to measure time; scoops of water or sand to measure capacity) and strategies for using them (e.g., place common objects end to end; use cubes to plan the length of a road at the sand table or the block centre; measure the distance between the classroom and the water fountain in number of footsteps) [B,A]	Measuring Up It's Time!	Unit 4: Measuring Up Unit 11: Mass Unit 22: Length Unit 24: Capacity Unit 31: Math in the Sea Unit 32: Math Party
16. demonstrate, through investigation, a beginning understanding of the use of non-standard units of the same size (e.g., straws, paper clips) [B,A] Sample Problems: "How many	Measuring Up	Unit 4: Measuring Up Unit 11: Mass Unit 22: Length Unit 24: Capacity Unit 31: Math in the Sea Unit 32: Math Party

17. explore, sort, and compare traditional and non-traditional two-dimensional shapes and three-dimensional figures (e.g., compare equilateral triangles with triangles that are not equilateral; sort different sizes of boxes, attribute blocks,5 pattern blocks, a variety of triangles, shapes with three curved sides, objects that create an open shape with three lines) [C] Sample Problems: “Look at the objects in the sorting circle. Can you guess the rule I was using to sort them? What other objects could we put in the circle?” “Use three strips of paper to show me a triangle. Use your strips to show me something that is not a triangle.” Student Talk: “We sorted our shapes into ones that are round and ones that have points.” “It is a weird, long triangle but it has three sides. It looks like a triangle that is all stretched out.”	What’s the Shape? What Comes Next?	Unit 1: Shapes All Around Unit 12: Making Patterns Unit 14: Making Shapes Unit 32: Math Party
18. identify and describe, using common geometric terms, two-dimensional shapes (e.g., triangle) and three-dimensional figures (e.g., cone) through investigations with concrete materials [C,A] Student Talk: “It has three straight sides. It’s like the yield sign at the block centre.” “It’s like an ice cream cone. It has a point.”	What’s the Shape?	Unit 1: Shapes All Around Unit 14: Making Shapes Unit 32: Math Party
19. compose pictures and build designs, shapes, and patterns in two-dimensional shapes, and decompose two-dimensional shapes into smaller shapes, using various tools or strategies (e.g., sand at the sand table, stickers, geoboards, pattern blocks, a computer program) [C,A] Sample Problem: After reading a story in which tangrams are used, the teacher asks the children to make one of the tangram designs in the story by first placing tangram pieces on a premade outline of the design, and then recreating the design by placing the tangram pieces beside the outline. The teacher could also ask what other shapes the children could make by using two magnetic shapes on a cookie sheet. Student Talk: “My house has a		Unit 1: Shapes All Around Unit 14: Making Shapes Unit 32: Math Party

pointed roof." "My picture has lots of the same shapes – these ones are all round." "This house shape has a triangle on the top and a square on the bottom." "I used two triangles to make a rhombus."		
20. build three-dimensional structures using a variety of materials, and begin to recognize the three-dimensional figures that the structure contains [C] Student Talk: "I built a castle. I put three cubes on the bottom. I used a cone for the tower."		Unit 26: 3-D Figures
21. investigate the relationship between two-dimensional shapes and three-dimensional figures in objects that they have made [C,A] Student Talk: "I built a rocket ship. Look at the cone on the top. The front is a big rectangle." "I painted and stamped each side of the cube I made. I have six squares."		Unit 26: 3-D Figures
22. demonstrate an understanding of basic spatial relationships and movements (e.g., use above/below, near/far, in/out; use these words while retelling a story) [C] Student Talk: "I am sitting beside my friend." "I have moved this block on top of the tower."	Up, Down, All Around Short, Tall, Big or Small	Unit 15: Location Unit 22: Short, Tall, Big or Small Unit 30: Making Maps
Patterning		
23. identify, extend, reproduce, and create repeating patterns through investigation, using a variety of materials (e.g., attribute materials, pattern blocks, a hundreds chart, toys, bottle tops, buttons, toothpicks) and actions (e.g., physical actions such as clapping, jumping, tapping) [D]	What Comes Next?	Unit 10: Patterns Unit 12: Making Patterns Unit 32: Math Party
24. identify and describe informally the repeating nature of patterns in everyday contexts (e.g., patterns in nature, clothing, floor tiles, literature, schedules), using oral expressions (e.g., "goes before", "goes after", "morning, noon, and night", "the four seasons") and gestures (e.g., pointing, nodding) [D] Student Talk: "The next word will rhyme with wall because there is a pattern in the words." "The pattern goes 'big button, small button, bead, big button, small button, bead' so a big button goes next."	It's Time!	Unit 5: Time - Calendars Unit 10: Patterns Unit 13: Numbers and Counting Unit 29: Time of Day Unit 32: Math Party
Data Management & Probability		
25. sort, classify, and compare	Who Wears Shoes?	Unit 2: Making Groups

25. sort, classify, and compare objects and describe the attributes used (e.g., initially: sort them into piles or collections on the basis of a common attribute; eventually: state the rule they used to sort, classify, or compare) [E] Student Talk: “I sorted my animals by size.” “I grouped these all together because they are smooth.” “My shoes and your shoes all have zippers.”	Who Wears Shoes?	Unit 2: Making Groups Unit 3: Counting Groups Unit 18: Our Class Unit 20: Money Unit 31: Math in the Sea
26. collect objects or data and make representations of their observations, using concrete graphs (e.g., conduct simple surveys and use graphs to represent the data collected from questions posed; use a variety of graphs, such as graphs using people to represent things, bar graphs, pictographs; use tally charts) [E,A] Sample Problems: “How many pockets are on our clothing today? How might we show how many pockets we have?” Student Talk: “There are five people standing in the T-shirt row and six people standing in the sweatshirt row.” “More people like to eat apples than oranges.” “There is only one person left on the age chart that is 4 years old.”	Who Wears Shoes?	Unit 9: Investigating Chance Unit 18: Our Class Unit 31: Math in the Sea Unit 32: Math Party
27. respond to and pose questions about data collection and graphs [E] Teacher Prompts: “How are these alike? Different? The same?” “Can you find another one that would go in that group?” “Let’s look at our graph. What does it tell you?” “How can we use the pictograph of helpers to find someone who knows how to tie your shoe?”	Who Wears Shoes?	Unit 2: Making Groups Unit 3: Counting Groups Unit 18: Our Class Unit 20: Money Unit 31: Math in the Sea Unit 32: Math Party
28. use mathematical language in informal discussions to describe probability (e.g., chance, never,		Unit 9: Investigating Chance Unit 32: Math Party