"Students must learn mathematics with understanding, actively building new knowledge from experience and prior knowledge."
(National Council of Teachers of Mathematics 2000)

## Curriculum Outcomes for June

## Review and Revisit:

N1: Say the number sequence by 1's starting anywhere from 1 to 10 and from 10 to 1 . [C, CN, V]

N2: Recognize, at a glance, and name familiar arrangements of 1 to 5 objects or dots. [C, CN, ME]

N3: Relate a numeral, 1 to 10 , to its respective quantity.
[CN, R, V]
N4: Represent and describe numbers 2 to 10, concretely and pictorially. [C, CN, ME, R, V]

N5: Compare quantities, 1 to 10, using one-to-one correspondence. [C, CN, V]

PR1: Demonstrate an understanding of repeating patterns (two or three elements) by: identifying; reproducing; extending; creating patterns using manipulatives, sounds and actions. [C, CN, PS, V]

SS1: Use direct comparison to compare two objects based on a single attribute, such as length (height), mass (weight) and volume (capacity). [C, CN, PS, R, V]

SS2: Sort 3-D objects using a single attribute. [C, CN, PS, R, V]
SS3: Build and describe 3-D objects. [CN, PS, V]

## Taking Mathematics Outdoors

Outdoor Activity Cards - Using activity cards (see Portal), set up Stations for students to rotate through. (N1, N3, N5)


Up and Down - Students will join you in counting to 10 as they slowly stand up and kneel down. Ask students to make their bodies as small as possible. As you say the number 1, have the students slowly stretch their bodies. Continue saying the number sequence to 10 together as the students' bodies gradually stretch taller and larger. When you reach the number 10 , students' bodies will be fully extended with their hands in the air. A variation of this activity is to start with the students' bodies fully extended and say the number sequence backward. (Nl)

Scavenger Hunt_- Make a scavenger hunt for your students that involve math concepts such as: geometry, patterns, things to measure ure क्ता and things to count. See Portal for sample.

Outside Games - Hop scotch and jump rope use mathematics as does every kind of ball game.

See Pat and Danny's Math Related Phys. Ed. Activities PDF on the Portal for the complete instructions for the following activities:

Math Bowling - Combine the practice of underhand rolling skills with math computation problems. Student rolls a ball to hit a bowling pin or 2 L bottle with a card attached that contains the solution to a math problem read by the teacher. i.e. "There are 3 blue socks and 2 red ones. How many socks altogether?" (N4)

Body Numerals - Teacher calls out a number from 1 to 10. Teams of students have to use their bodies to form that numeral. (N3)

Crazy Math - Students are scattered in the playground. They stop when the whistle blows, and the teacher calls out a number from 2 to 10 , and an action to indicate how they should move. The students must join other students to make a group of that size. (N3)

## June - Kindergarten

## Engaging Students in Summer Math Fun!

See portal for "Home Activities that Encourage Math Sense (K-2)" and "Games for Helping Your Child with Math (K-2)".

The following websites have comprehensive math brochures for parents to support math learning: http://www.edu.gov.mb.ca/k12/docs/parents/learn/ma th.pdf
http://www.bced.gov.bc.ca/early_learning/pdfs/math_f or families.pdf

## Investigation Ideas

Number Collection Box: Students collect sets of objects to show quantities from 1 to 10. For example, in one box a student might put 1 pet rock, 2 shells, 3 pine cones, etc. (N3)

Play-Dough Creations: Have students create sculptures using at least two different 3-D objects that they make from play-dough (or air-drying clay). Have them describe their creations to the class. (SS3)

Outdoor Measurement: Bring out a large tub of water and a variety of
 different-sized containers (some with equal volume) for students to investigate capacity. Have students collect sticks, rocks, blades of grass, leaves, etc. and compare them for length and mass
Find an object on the playground that is taller, longer, and shorter than they are. (SS1)

Footprint Pattern Fun: Using sidewalk chalk, have students trace their feet to create patterns.


As an extension, students could make patterns by interspersing their footprints with those of animals. (PR1)

## Literature Connections

The Right Number of Elephants by Jeff Sheppard - Students predict and count how many elephants are needed to perform different tasks. (N3)


Pattern Fish by Trudy Harris - Brightly coloured fish display repeating patterns throughout the book. (PR1)

One Gorilla: A Counting Book by Atsuko Morozumi - One playful gorilla keeps popping up in odd places as he takes the reader on a wild counting adventure.

## Sila <br> Size (Math Counts) by Henry Arthur Pluckrose - Students investigate many features of size. (SSI)

## Journal Ideas

At the zoo I saw 8 animal legs. Who might they belong to? Draw a picture to show the animals I saw. (N4)

Draw a pattern using circles, triangles and squares. (PR1)

The answer is 10 . What is the question? (N4)
There are 9 balloons. Some are red and some are blue. There are more red balloons than blue balloons. Draw the balloons. (N5)

Draw something that is very long and something that is very short. (SSI)

Provide students with various building materials, such as Lego, snap cubes or blocks. Ask them to build an object. Have them describe the object in their journal using words such as round, flat, shaped like a box, thick, thin etc. (SS3)

## Game/Activity Ideas

Marvelous Macaroni: Using coloured macaroni, students will sort, count and make patterns. See portal for instructions, including how to make the coloured macaroni. (N3, PR1, SS2)

3-D Object Walk; After reading Tana Hoban's Cubes, Cones, Cylinders, \& Spheres, take your class on an "object walk" around your school. Discuss the different 3-D objects you find in the environment. Have students
 record one of the objects they saw in their journals when they return to the room. (SS3)

Class Measurement Book: Have students work in pairs or small groups. Assign each group to a measurement topic such as mass, length, or volume. Use a camera, magazine pictures or students' drawing to illustrate the book. (SSI)


## Interesting Websites

More Taking Mathematics Outdoors, visit http://www.nctm.org/resources/content.aspx?id=29945 and http://creativestarlearning.co.uk/c/maths-outdoors/

