



March Curriculum Planning Kindergarten



"The way human beings learn has nothing to do with being quiet." Ralph Peterson

Math Talk

Discussion among students is a critical component in their mathematics development. When students talk about mathematical concepts and strategies, they are using and creating knowledge. This occurs via two pathways.



Pathway One is through students' own talk. When children participate in a discussion, they have an opportunity to "talk out", or voice their thinking. The process of verbalizing their thoughts brings further clarity to their ideas. The exchange of ideas that takes place in that process further builds their schemata, constructing new ideas.

Pathway Two is through listening to other people's ideas. When students engage with other children's ideas, they learn new ways of thinking, constructing meaning, and enriching their own understanding.

From Number Sense Routines by Jessica F. Shumway

Curriculum Outcomes for March

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

N4: Represent and describe numbers 2 to 10 concretely and pictorially. (Extend to numbers to 10). [C, CN, ME, R, V]

N5: Compare quantities, 1 to 10, using one-to-one correspondence. (Focus on numbers to 5). [C, CN, V]

N3 (revisit): Relate a numeral, 1 to 10, to its respective quantity. [CN, R, V]

Revisit N3 through warm-ups, exit cards, journaling and other quick activities.

Mathematical Processes

Communication (C): Through discussion and explanation, students will begin developing their understanding of part-part-whole relationships. As they think and talk about number problems involving partitioning sets of objects, young students devise personal strategies to compute.

Connections (CN): Number sense develops naturally as students use numbers as benchmarks and referents. Play the Number Ladders Game – The benchmark numbers 5 and 10 are placed across the table, with spaces between each number. In small groups, students take turns selecting a numeral card (0 to 9) and placing it on the number ladder, explaining their placement. For example, if a student selects the number 7, he or she might place the card a little above 5 and say, "It goes here because it is more than five." Play continues until the ladder is completed.



(Model this activity with the whole group prior to having students work in small groups.)

Reasoning (R): Reasoning can be nurtured at a very early age by asking students to explain and justify their observations with questions such as "Why do you think that's true?" and helping students distinguish between real evidence and non-evidence. (Dr. Florence Glanfield)

Mental Mathematics and Estimation (ME): In order to develop fluency with part-part-whole relationships and subitizing, students should have regular practice every day.

Problem Solving (PS): Problem solving enables students to make sense of mathematical concepts. Problems should be relevant and there should be multiple paths to arrive at a solution. Students need many opportunities to model and solve a variety of problems involving the comparison of two quantities. See **Portal** for Story Problem Bank.

Technology (T): Find pictures of sets of objects up to 10 using Google Images. Show the picture and suggest two possible quantities. Have students count the set to make their choice.

Visualization (V): Have students close their eyes and imagine a particular number of objects. Ask, "How do you see 4?" Students should reply giving the part-part-whole representation (e.g., "I see 3 and 1." or "I see 2 and 2.").



Seasonal Activities

Leprechaun's Pot O' Gold Lesson for the SMART Board - see **Portal** (N4)

St. Paddy's Number Fun SMART Board lesson – see **Portal** (N4)

St. Patrick's Day math ideas:

<http://makinglearningfun.com/themepages/StPatricksDayMathIdeas.htm>

Various St. Patrick's Day math activities:

<http://prekandksharing.blogspot.ca/2012/03/montessori-inspired-st-patricks-day.html>



Literature Connections

Just Enough Carrots by Stuart Murphy

When Rabbit goes grocery shopping with mom, he knows what they should buy – more carrots and fewer worms! (N5)



Ten Sly Piranhas: A Counting Story in Reverse by William Wise (N1)

Investigation Ideas

Frog Stories: Tell students that there are 8 frogs living in Mr. Smith's yard. They like to play in the grass and swim in the pond.

- On Monday, 6 frogs played in the grass and 2 frogs swam in the pond.
- On Tuesday, 4 frogs played in the grass and 4 frogs swam in the pond, etc.

Record the number combinations as the story is read/ told. Example:



Have students Make their own part-part-whole stories. (N4)

Story Mats: Students tell, or act out, stories using objects, pictures and story mats. They can use settings such as the duck ponds and ducks shown below. See Math Makes Sense, Unit 2, BLM 10 -13 for more story mats. (N4)



What's the Order? Place a different number of objects on several paper plates. Select three of the plates and ask students to order them from least to greatest. Ask, "How do you know your order is correct?" Add another plate and have them reorder. Continue until all plates have been used. Repeat the activity using five frames, ten frames, and dot cards. Extend the activity by having students use numerals along with the objects and representations. (N5)

Journal Ideas

Provide the student with numeral cards 1 - 10. Have the student pick a card and in their journal draw a set to represent the number and record the numeral. (N3)

Provide the student with a given number (10 or less) and ask students to make 2-color trains, using snap cubes (e.g. 2 blue and 3 red to represent 5). Have the student tell you about the number of cubes used by drawing their train in their journal and recording the number. (N4)

Working in pairs, each student is given a die. At the same time each student rolls a die. If the dots add up to 6 they record the combination in their journal (drawing dots and numeral combination). (N4)

Show the number 7 in as many different ways as you can. (N4)

Choose two words from the Word Wall. Print your two words. Which word has more letters? (N5)

Write a story using the number 8. Draw a picture. (N3)

Interesting Websites

Speedy pictures:

http://www.fi.uu.nl/toepassing/00204/toepassing_rekenweb.xml?style= rekenweb&language=en&use=game

Numerous kindergarten websites organized by outcome and strand:

<http://hzsd.ca/learningcenter/library/Math%20Resources/Kindergarten%20Math%20Websites>

Game/Activity Ideas

Musical Bears: The teacher fills each bag with a different number of teddy bear counters (from 1 to 10 counters). Each child chooses a bag and sits in a circle on the floor. While the music is playing, the children pass the bags around until the music stops. When the music stops, everyone counts the bears in the bag. The teacher holds up a dot card and students count the dots. All children who have bags with that number of bears, empty their bags into the center of the circle. Play continues until all bags have been emptied into the center of the circle. *Variation:* Use numerical cards rather than dot cards. (N3)



Counting Pots: Label five containers with dot cards 1 to 5. Have the child count the dots on the label and then count out either the same, fewer, or more objects to put in the pot. The child should be able to tell whether the amount in the cup is the same, more, or less than what is represented on the label. (N5)



Domino Dots: Provide students with dominos that represent numbers up to 10. Ask students to name the number of dots on the domino, and the number of dots on each. See **Portal** for dominoes. (N4)



Class Riddles: Have the students make up simple riddles to ask the class. E.g., I am 3. What comes after me? I am 4. What comes before me? I am 2. What is one more? (N1)