



October Grade 1 Curriculum Planning

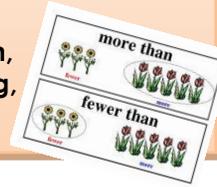


“If students have already been given ways to solve the problem, it is not a problem, but practice” (Curriculum Document)

Math Word Wall

Knowing the right word to use allows students to communicate more effectively and efficiently. Often, mathematics cannot really be understood or communicated without reference to appropriate vocabulary. Introducing new terms and placing them on a word wall can help to solidify understanding of the vocabulary. Encourage students to create their own word wall cards to demonstrate understanding of a word. Re-visit these words often: Do they remember words from past outcomes? Are they using these words? Can they explain the words? Do they demonstrate understanding?

Words for this month: more than, one more, two more, pattern, ten frame, number, hundred chart, number line, skip counting, counting.



Curriculum Outcomes for October

N1: Say the number sequence, 0 to 100, by:

- 1s forward and backward between any two given numbers (1's to 50 • Forward by 2s to 10 • 5s to 50 and 10s to 100). [C, CN, V, ME]

N2: Recognize, at a glance, and name familiar arrangements of 1 to 10 objects or dots.

[C, CN, ME, V]

N3: Demonstrate an understanding of counting by:

- indicating that the last number said identifies “how many”
- showing that any set has only one count
- using the counting on strategy
- using parts or equal groups to count sets. [C, CN, ME, R, V]

N4: Represent and describe numbers to 20 concretely, pictorially and symbolically. [C, CN, V]

Focus on numbers to 10.

N8: Identify the number, up to 20, that is 1 more, 2 more, 1 less and 2 less than a given number.

[C, CN, ME, R, V]

PR1: Demonstrate an understanding of repeating patterns (two to four elements) by:

- describing
 - reproducing
 - extending
 - creating
- patterns using manipulatives, diagrams, sounds and actions. [C, PS, R, V]**

Mathematical Processes

Communication (C): There are several ways students can communicate why they may want to count by a number other than 1. Example: In a math journal, students could respond to the question: “How can you use pictures and words to explain how to count a set of 9 counters by 2’s?”

Connections (CN): Patterns are everywhere. Children are surrounded by patterns in nature, in their homes, and in everything they do. Patterns and relationships also can be developed through connections with other areas, such as science, social studies, language arts, physical education, and music.

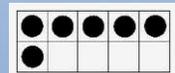
Reasoning (R): When students are solving problems and are asked to explain their reasoning, (How do you know? Does this work every time?), it gives students the opportunity to solidify their understanding of the concepts involved. For example, when students are discovering that whether they skip count a set of 20 by 2’s, 5’s or 10’s the count will not change.

Mental Mathematics and Estimation (ME): Subitizing is a fundamental skill in a student’s development of number understanding. There are two types of subitizing; perceptual and conceptual. Perceptual subitizing is the ability to recognize the quantity of a set without counting. It is the basis for counting and cardinality. Conceptual subitizing is seeing number patterns within a set (part—whole) and then determining the quantity by putting the number patterns together. For example, when shown a domino with a pattern of 8 dots the observer may break the 8 dots into two groups of 4.

Problem Solving (PS): Students are exposed to a wide variety of problems in all areas of mathematics. They explore a variety of methods for solving and verifying problems. In addition, they are challenged to find multiple solutions for problems and to create their own problems.

Technology (T): Van de Walle and Lovin suggest having students use a calculator to skip count by 2’s and 5’s (p.45). SMART software as well as interactive websites can be used to help students skip count using a 100 chart.

Visualization (V): When using ten frames children internally visualize that when you have three counters, you need two more to make five; it is two away from five: or three and two make five.



For Your Information

Morning Messages

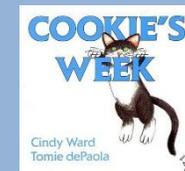
Every morning a message is written on chart paper or on the SMART board. After a greeting, a math related question can be posed for the students to respond to. Students can respond to the questions by answering with a tally, an estimation or an answer if the question is specific. Teachers may even choose to create Math related sign-in pages that include the current weekly/monthly outcome.

Journals

Finishing an investigation and discussion with students writing in their math journals helps them to create meaning and can be used as formative assessment for the teacher. If the journal question is directly connected to the investigation or other activity of the day, it may reveal the depth of understanding of the concepts. The teacher may wish to circulate while students are writing to place a sticker on the page, jot down observational notes of clarity needed, and direct planning for future activities.

Literature Connections

Read books that are patterned after the days of the week (e.g., The Very Hungry Caterpillar and Today is Monday by Eric Carle; Cookie's Week by Cindy Ward) and the seasons (e.g., The Seasons of Arnold's Apple Tree by Gail Gibbons). Have students write their own pattern books.



Investigation Ideas

Scenario investigations: Your teacher wants to make 8 (up to 12) math kits for small group work. She wants each kit to have: 10 cubes, 2 dice and 5 beans. (Vary the items based on materials available.) She wants to know how many of each item she will need. Have students work in partners. Note: Groups can be working on one item or on all three depending on their level of readiness. Provide each group with a large piece of paper and a marker. Allow them the freedom to try to solve the problem. Select a variety of solutions to have students share in a whole-class meeting. (N1)

Class Number Book- You will need: large sheets of paper, markers, and manipulative materials. The class will make a number picture book. Each page will show how to represent one of the numbers from 1 to 10. Have students work with a partner. Assign each group a different number from 1 to 10. Provide a large sheet of poster paper and have students use drawings, number sentences, materials (money, ten frames, base-10, counters, etc.) to represent each number. The pictures can then be compiled into a class book. Set criteria with the class. Possible criteria might include: defining the minimum number of representations expected, the variety of representations, the appearance itself (layout, print size, neatness, etc.) (N4)

Journal Ideas

- Show how you would count to 20 in as many ways as you can. (N1)
- When would you want to count by 2's? Explain your thinking. (N1)
- When would you want to count by 5's? Explain your thinking. (N1)
- When would you want to count by 10's? Explain your thinking. (N1)
- If you start at 0 and count forward by 5's will you say 19? Explain your thinking. (N1)
- Draw the picture you see in your head when you hear the number 6. (N2)
- Represent the number 9 in as many ways as you can. (N4)
- Write down the names of the students in the class who have 1 more letter in their name than you have in your name. (N8)
- Tell about patterns that you see in the classroom. (PR1)

Game Ideas

I have... Who has? -You will need a set of 'I Have... Who has...?' number cards (see portal). Pass the cards out in random order. Select a student to read his or her card. Have the other students listen for the question to which they have the answer on their card. If they have the answer, they read their card. Play continues in this manner until returning to the start card. (N1)

Find the Counters - Hide sets of counters under plastic containers to match the numerals on a number cube. Students roll the cube, and say the number rolled, to determine the number of counters that they are to look for. Students take turns lifting the containers and counting to see who can find the number of counters matching the number rolled. (N2)



Memory- Using number word cards (zero to ten) and numeral cards (0-10), students play a game of memory matching the numeral to the word card. (N4)

One More/Two More Bingo- See curriculum document p.36. Students can make their own bingo cards using the dot and numeral cards from the MMS Teacher's Guide. (N8)

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| 3 | 4 | ••• | ••• | 2 |
| •• | ••• | 5 | 7 | 6 |
| 8 | 5 | FREE | ••• | ••• |
| ••• | •• | ••• | 6 | 4 |
| 7 | 3 | •• | 2 | ••• |

Interesting Websites

- <http://illuminations.nctm.org/ActivityDetail.aspx?ID=75>
- <https://portal.nbed.nb.ca/sites/district08/math8/default.aspx>
- http://www.literactive.com/Download/live.asp?swf=story_files/sequence_game_US.swf