

Daily Math Routines Kindergarten

Teachers will conduct a CLASS MEETING each morning (pertaining to mathematics) for approximately 10 minutes. The following activities and concepts MUST be introduced, discussed and reinforced. The class will meet seated in front of a large monthly calendar, visible to all. Create space around the calendar for relevant charts/graphs. Organize graphic cards, math manipulatives, magnetic boards, easels. Pocket charts are wonderful additions. The meeting area might also be organized around the SMART Board to achieve optimum results.

The NYS CCS for Kindergarten mathematics follow a 70%/20%/10% gradient, with addition/subtractions concepts, skills and problem solving comprising the vast majority (70%) of day-to-day instruction. Geometry and measurement comprise 20%; Patterning, statistics/data, probability and estimation comprise 10%. The suggestions listed below are organized by concept, but should be taught via the above mentioned gradient.

Number Sense:

- The first hundred days of school. Begin counting from day 1 and add one (on a chart or chain, etc.) each day. Chart the number of days in school by using tally marks.
- Use 3 cans labeled: ones, tens, and hundreds. Place one straw in the "ones" can each day. Bundle tens, count and trade up to 180 days.
- Count the number of students in attendance each day. Tell whether more, fewer, or the same as yesterday. Predict for tomorrow.
- Posting and reading number words (i.e. one, two, three, etc.) up to twenty.
- Concept of ordinal numbers (**first** day of the week, **ninth** month of the year, etc.).
- Create ten frames for numbers represented on the current monthly calendar.
- Discuss the concept of one more/one less by posting a number, then discussing the number that comes before and/or after. Vary this activity as the year progresses by discussing two more/two less, three more/three less, etc.
- Discuss various number combinations* by posting a number (i.e. 4), then asking the students to use manipulatives to determine the various combinations. Post the number on a chart, then record the first combination, second combination, etc. (i.e. $1 + 3 = 4$; $2 + 2 = 4$). Much time should be spent focusing on developing fluency of addition/subtraction facts through 5. Stress that numbers can be constructed based upon any number of combinations, not just one way.
*Vary this activity as the year progresses to include higher-level numbers (through 20), paying close attention to the "tricky teens".
- Count forward to twenty (by 1s) beginning with a number other than 1.
- Compose/decompose numbers to twenty via ten rods and ones pieces.

- Display a number card (i.e. 2), then ask the students to indicate "how many more" to make 5. Vary the activity by asking "how many more" to make 10. This activity can also be used with subtraction by showing, for example, the number 7, and asking the kids to name the amount to remove in order to make a number (i.e. 5).
- Call out a number between 5 and 10. Ask the kids to respond "five and ___" using the appropriate number. For example, if you say, "Eight!" the children respond with "Five and three." Vary the activity by displaying partially filled ten frames and asking the kids to complete the frame orally to make ten. If 7 items are displayed in the frame, the response would be "seven and three is ten."
- Display number lines that are missing random numbers (0-20). Have the students count forward/backward, and fill in the missing numbers.
- Show a collection of cards with a specific set of objects (i.e. 9) and the corresponding number. Have the students find another card (not depicting the number) displaying the same amount of objects in order to form a pair. Strive to have the students do this with automaticity, as opposed to always having to count the objects in order to determine the mate.
- Correlate rhythmic counting with some form of movement. For example, in a count-to-7 exercise, the students might stretch their hands above their heads and clap each count up to 7. Then in the same rhythm and without slowing down, lean over and clap each count, again from 1 to 7, down to their knees. Use of musical instruments (i.e. triangles, chimes, bells, rhythm sticks) is a great addition.
- Hold up a dot plate (large circle containing an arrangement of dots from 1-20) for 1-3 seconds. Challenge the students to see how quickly they can recognize and say how many dots were displayed.

General Sense of Time/Weather:

- A poem or song pertaining to the days, months, seasons, and/or holidays.
- Sequence the days of the week and the months of the year.
- Discuss how many days remain in the week, month, and/or school year.
- Concepts of yesterday, today, and tomorrow (i.e. "Today is...," "Yesterday was...").
- Discuss elements of the season, holidays, weekends, etc.
- Record the weather for the month via logs, charts and/or graphs. Compare from week-to-week and/or month-to-month.

Patterning:

- Use colored shapes to cover calendar days in order to create patterns (i.e. red square, green triangle, red square, green triangle– AB pattern) such as AB, ABC, ABB, AABB, AABBC, AAB, ABBC, AABC, ABCC, etc. Vary patterning styles from month-to-month beginning with AB in September and ending with ABCC in June.

Graphing:

- Create differing types of graphs (i.e. pictograph, bar, line) to organize, compare, count and analyze acquired and/or surveyed data. Graphs to consider include: birthday, favorite flavor of ice cream, favorite animal, weather, favorite lunch food, favorite outside activities, articles of clothing (i.e. hat, mittens, scarf, etc).

Geometric Shapes:

- Create laminated posters featuring a differing shape (i.e. circle, square, triangle) and post near your calendar. Select one shape per week and ask students to think about where they see the shape within their environment (school, home, within the community), and to discuss its relative position (i.e. above, below, beside, next to) to other objects. Record the students' ideas on the poster, and continue doing so as the week progresses. Vary this activity to include geometric solids (i.e. cone, cube, rectangular prism).
- Make a collection of poster board shapes depicting differing properties (i.e. curved edges, three sides, right angles/square corners). Try to prepare pieces so that the ideas you want the students to learn are represented by at least four or five differing examples. Ask the kids to sort the items, indicating the sorting rule, classification, property, etc.
- Prepare two identical collections of shapes. One set is placed in view. Out of the children's sight, place the shapes from the other set in a box or bag. Ask the children to reach into the box, feel a shape without looking, and attempt to find the matching shape from those that are displayed. This can be done with either two-dimensional tabboard shapes or with solids.