

Centers, Counts, and Talks! Oh, My!

Building Number Sense in PreK and Kinder

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Texas PreK Guidelines for Number and Operations

Number Sense

- V.A.1 Rote counts from 1 to 30.
- V.A.2 Counts up to 10 objects with one-to-one correspondence.
- V.A.3 Counts up to 10 items and demonstrates cardinality by communicating that the last number indicates how many items are in the set.
- V.A.4 Instantly recognizes the quantity of up to 6 items without counting (subitizes).
- V.A.5 Recognizes numerals 0 to 10.
- V.A.6 Represents quantities up to 10.

- V.A.7 Child begins to understand that numbers 0-10 can be composed and decomposed in various ways to represent a quantity.
- V.A.8 Compares sets of objects up to 10 using comparative language (e.g., greater than/less than/equal to/same number as).

Joining and Separating

- V.B.1 Uses objects, pictures, or verbal word problems to represent adding up to 5 objects.
- V.B.2 Uses objects, pictures, or verbal word problems to represent subtracting from a set of 5.

Counting Workstations

Number Sculptures

Materials: floral foam or Styrofoam, miscellaneous craft items such as feathers, tees, craft sticks, straws, etc.

Instructions: Children create a sculpture to represent a quantity. For example, if they choose the number four, they would use four feathers and four straws to create their sculpture.

Hole Punch of Fun Counting

Materials: hole punchers, index cards numbered 0-10

Instructions: The child punches the correct number of holes in the index card.

Swat a Number

Materials: fly swatter, die with 0-5 dots, cards numbered 0-5, differentiate by creating a die with digits 6-10 and corresponding cards

Instructions: Child rolls die, counts the pips, then uses fly swatter to swat the correct card. Can be done with a partner where one rolls and the other swats.

Wrapping Paper Sets

Materials: wrapping paper scraps, markers

Instructions: Have children circle sets of two objects, such as two teddy bears, two presents, or two balloons—whatever pattern is found on the wrapping paper. Next time, have students circle sets of three, four, or five.

Number Composition/Decomposition Activities

Make Four Elbows

Materials: none

Instructions: Children form a circle and begin slowly walking in one direction. At a signal from the leader, they stop and listen to instructions. When the leader states, "Make four elbows," the children touch one or both of their elbows to other children's elbows to make a total of four connected elbows. Each group then shares their methods for accomplishing this task. Other directions might include: make 12 fingers, make four knees, and make 2 hips.

Domino Parking Lot

Materials: work mat with section for each focus number (i.e. 0-10)

Instructions: Place dominoes face down on table. Students take turns drawing a domino, adding the number of dots on both sides of the domino and placing it in the correct "parking spot" on the mat. For example, if the domino has three dots and five dots, the domino is placed on the EIGHT parking spot. If a domino is already placed on the EIGHT parking spot, the new domino is stacked on top of it. Each person takes ten turns. At the end of ten turns, the person with the tallest stack on any parking spot is the winner.

Number Bond Bracelets

Materials: pony beads, pipe cleaners

All videos are available on Carrie's YouTube channel

Instructions: Children each make a bracelet with a target number of beads. Use only one color of bead for a bracelet. Then have children slide the beads to see the break-apart partners for the target number. For example, five can be thought of as 1 and 4, 2, and 3, or 5 and 0.

Linker Cubes Friends of 10

Materials: linker cubes, name tags numbered 0-10 (you may need multiple sets)

Instructions: With students, make a stick of ten cubes then set it on front table. Give each child a name tag with a number 0-10. Students make stick to match their number then walk around room and find partner whose number plus theirs sums to 10. Students double check by comparing their stick to the stick on the front table.

Join & Separate Workstations

The Disappearing Train

Materials: 20 cubes, die

Instructions: Build a train 20 cubes long. Players take turns rolling the die and removing that number of cubes from the train until there are no cubes left. The player who has the most cubes in their pile is the winner.

Trains to Twelve

Materials: ruler, 1" tiles, die labeled 0, 1, 2

Instructions: Partners take turns rolling die and adding that number of tiles along ruler. The partner who reaches 12 first wins. Then play Trains to Zero and remove tiles until all are gone. Who wins the removing tiles game more easily? Why is this?

Lose a Tooth Counting Game

Materials: small marshmallows, drawing of mouth with spaces for about 20 teeth (attached), die

Instructions: Children place marshmallows in mouth for top and bottom row of teeth. Roll the die and remove that many teeth from the mouth. Place the removed teeth in a cup. Whoever loses all their teeth first is the winner.

Counting Collections

<https://tedd.org/mathematics/>

Students work in pairs or small groups to count sets of small objects (cubes, flat sided marbles, gems, beads, craft sticks, elastic bands, erasers, etc.). If desired, they place groups of objects in a container (plastic cup, bowl, nacho tray) in subsets (2s, 5s, 10s) to make the count easier. Students can show/tell the teacher how they counted or record their count in writing/drawing using a recording sheet. As the teacher walks around, he/she can ask guiding questions and take notes using an anecdotal record sheet.

Guiding or Assessment Questions to Ask as Students Count

- How are students keeping track? "How do you know which ones you've counted and which ones you haven't counted?"
- Are students working together? "It looks like the two of you are using different strategies. Do you have a plan for how you will add your totals together?"
- Are students beginning to group objects? If so, how? Do they combine groups to make larger groups? "Why did you decide to put these into ___ (cups of 5, 10, 50)"
- Can students count by 1s? 10s? 10s *and* 1s? "How many cups did it take to get to 50? If you made another cup, how many would you have?"
- What strategies are students using to count by sets? "What made this collection tricky to count?"

During the debrief, students share strategies based on the mathematical or social goals that the teacher intended to highlight such as strategies for keeping track of how many we counted, strategies for grouping, strategies for counting sets of objects, compromising about a strategy, recording the count on paper, etc.

Number Talk with a Hundred Chart

1. Leave a number out and have students identify it and tell how they know.
2. Mix up the cards and have children "fix the chart" and tell how they know.
3. Play Mystery Number. "I'm thinking of a number greater than 5 but less than 10." Children turn over the number cards it could be.
4. Ask the children to complete a row or column on the chart. (The column one is tough!)
5. Play One More/Two More and One Less/Two Less games.
6. Struggles with teens? Build chart to 20. Flip teens to red side. Ask what patterns they see. Talk about how teens are "ten and some more." Remove teens and have students build them by following patterns they see down the columns.

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