1-digit Number Recognition and Decomposition
# 10-Frames Activities

Standard: Kindergarten Number Sense 1.2 Count, recognize, represent, name, and order a number of objects up to 30.

Objective: Students represent numbers 1-5 on 10-Frames.
Students decompose and recompose the numbers 1-5 using 10-Frames.

Materials: Teddy bear counters or other counting manipulatives - 10 of one color per student pair
Note: For extension decomposing activity: 10 each of 2 colors per student pair
10-Frames 0-10 set (2-pattern and 5-pattern sets) - one set for teacher, and 1 set for each pair of students. Teacher can choose to use 2-pattern cards on one day, and 5-pattern cards on another day, or mix them up once students are familiar with the cards.

Introduction: Today we are going to use counters and 10-Frames to represent numbers.
(Go over classroom norms for using manipulatives. Pass out manipulatives and 10-Frames after teacher demonstrates with whole class.)

This is a 10-Frame. It has 10 boxes. We put dots in the boxes to represent numbers.
Show 1 teddy bear counter. Place it on a blank 10-Frame.
Show 10-Frame for Number 1.
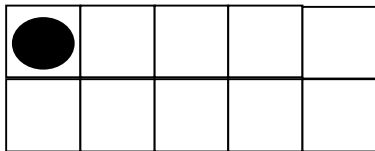
How many teddy bears do I have? (Choral Response: [1]
How many dots do you see? (Choral Response: [1])
Yes, I have 1 teddy bear counter, and this 10-Frame has 1 dot. The 10-Frame represents the number 1. I have 1 dot for 1 teddy bear.

Pass out manipulatives. Lead class in showing counters and the 10-Frame cards for 2 - 5 as above. Note 2-pattern and 5-pattern options. Show students both.

We can fill up these two boxes first, or these two boxes. Both 10-frames show 2. (Show students the same comparison for numbers 3-5 as well, as you come to them.)
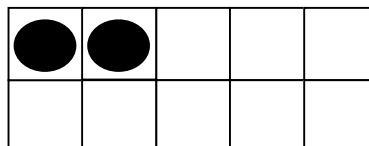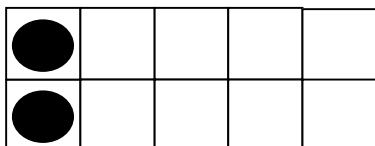
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Now you will do this activity with your partner. Partner 1 will show partner 2 some teddy bear counters. Partner 2 will pick the 10-Frame card that shows the number of teddy bear counters. Today we're going to pick 1, 2, 3, 4, or 5 teddy bear counters. (Allow them to show more as students are ready.) - Variation: Have 1st partner pick a 10-frame card, and then 2nd student shows counters to match.

Give student pairs 1 set of single color teddy bear counters and 10-Frame card sets.

Formative Assessment – As you walk the room, note students who are succeeding and those who are struggling. Note if most students are struggling with certain 10-frame cards in order to review those as a whole class or in small groups.

Today we showed numbers with teddy bear counters and with 10-frames.
How did you know which 10-Frame card to match with the teddy bears? What clues did you use? Did you always have to count?

Extension for decomposition

Do same activity but use 2 colors of teddy bears and 10-Frames with 2 colors of dots to show different decompositions that make numbers. Start with numbers 1-3.
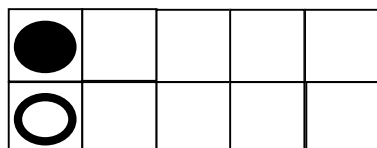
Today we will represent numbers with 2 colors of teddy bears and 10-Frame cards.

Show 2 of the same color of teddy bear. Show the 2 same-color dot 10-Frame.
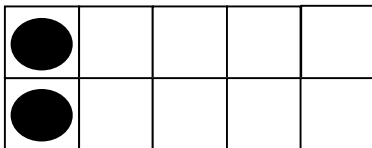
I have 2 blue teddy bears and I represent the number 2 with this 2-dot 10-Frame card.

Show 1 blue teddy bear and 1 red teddy bear. Show a 10-Frame dot with 1 dot each of 2 colors. (They don't have to be the same colors as the bears.)

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This 10-Frame card has 2 dots, but it shows 1 orange dot and 1 purple dot. I can make 2 with 2 of the same color and I can make 2 with 1 each of two different colors.

Show 2 of the second color of teddy bears and matching 10-frame.

Let's see how many ways we can make 3.

Build 3 with different color combinations of teddy bear counters. Have students join you with their 10-frames and counters. Match with 10-Frame dot cards with matching dot combinations. (1 and 2, 2 and 1, 3) You can use 2- and 5- patterns. Include examples for number 1 and number 2 during your exploration of number 3.
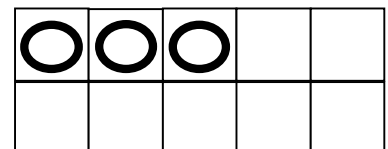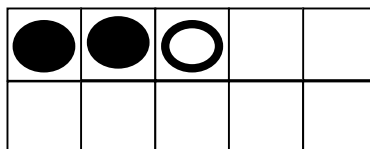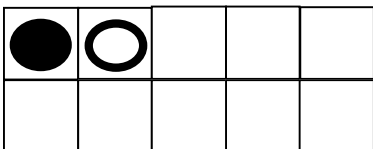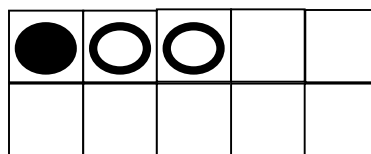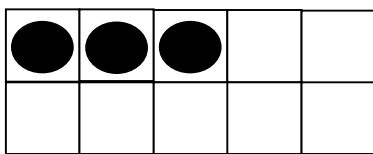
Now you will do this activity with your partner. Partner 1 will show teddy bears in combinations to show a number, and partner 2 will pick the 10-Frame card to match. (Start with numbers 1-3, then increase as students are ready.)

Formative Assessment – As you walk the room note students who are succeeding and those who are struggling. Make note of which dot combinations are easiest for students and those that are more difficult. Ask thinking questions like, "You made 3 with 3 red counters, what's another way you can make three with 2 colors of counters?"

Closing:

What did you and your partner notice when you were doing this activity together?
What helped you to know how many different colored dots should be on the 10-Frame card?

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Variation: Students record combinations on blank 10-frames with different colored crayons, or record on blank 10-frames in clear sleeves with whiteboard markers.

Continue on subsequent days with larger numbered 10-Frame cards. Record different combinations for different numbers and post in the room for reference.

Connect work with 10-Frames and decomposition with 10-Frames to linker cubes, subitizing, and other number activities. "Look at all the different ways we can make 7".

Students should have many opportunities to practice these activities in order to build their fluency with representing numbers with different combinations on 10-Frame cards.