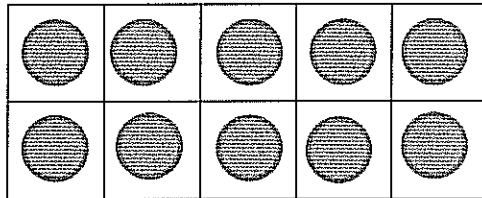


## Ten-Frame

Grade Level PK – 3

### Description



A ten-frame is a 2 by 5 grid (array) used to develop an understanding of concepts such as 5-patterns, combinations to 10, and adding and subtracting within 20. The frame is filled beginning on the top row, left to right, then proceeding to the bottom row building left to right. This pattern of filling supports subitizing by building on the 5 benchmark, as well as providing a pattern for placing disks on place value mats in later grades. Concrete counters as well as pictorial dots may be used to represent quantities on the frame.

In Kindergarten and in early Grade 1 a double ten-frame can be used to establish early foundations of place value (e.g., 13 is 10 and 3 or 1 ten and 3 ones) and can also be used on place value mats to support learning to add double digit numbers with regrouping. The “completion of a unit” on the ten-frame in early grades empowers students in later grades to understand a “make 100 (or 1000)” strategy, to add 298 and 37 (i.e.,  $298 + 2 + 35$ ), and to more fully understand addition and subtraction of measurements (e.g., 4 ft. 8 in. + 5 in).

### Instructional Strategies

- “Flash” a ten-frame for 3-5 seconds then ask students to re-create what was filled/not filled on their own personal ten-frame. (Students may also tell how many they saw or match the “flash” with a numeral card.)
- Use “flash” technique, but ask students to tell 1 more or less than the number flashed.
- Roll dice and build the number on the ten-frame.
- Partner games: Partner 1 rolls a die and builds the number on the frame. Partner 2 rolls and adds that number to the frame (encouraging “10” and “leftovers” or using two ten-frames to represent the sum).
- Play Crazy Mixed Up Numbers. Have children represent a number on the ten-frame, then give various directions for changing the frame (e.g., start with 4 – “two more” – “one less” – “one fewer” – “double it” – “take away three”). This activity has the added benefit of providing the teacher with the opportunity to observe how students count – who clears the mat and starts over each time and who is counting on and/or subtracting.

- Write number stories about the filled and “unfilled” parts of the ten-frame.

Counting in unit form:

Regular	Unit Form
eleven	1 ten one
twelve	1 ten two
thirteen	1 ten three
twenty	2 tens
twenty-six	2 tens six

- Represent a number between 5 and 10 on the frame with one color counter. Have students add a quantity between 6 and 9 (represented by a second color) to it (e.g.,  $7 + 6$ ). Encourage students to “fill the frame” and re-state the problem as  $10 + 3$ .