

# An Introduction to 10 Frames: Making 10s



by Theresa Trotter, Clatskanie Elementary School, Clatskanie, Oregon

**I**N MY OWN LIFE, I have always looked for combinations of 10 when I need to mentally add a group of numbers. I have been surprised to find how few other people, especially students, use this strategy. My attachment to “10 partners” was validated during Greg Tang’s keynote speech at the 47th Northwest Math Conference held this last October in Portland, Oregon and Vancouver, Washington. The core of his presentation was about looking for combinations of 10 in a variety of applications.

When I first saw 10 frames in our textbook, I was baffled as to how to use them, I ended up just skipping those pages. I finally attended a workshop that taught me how to use them and I became a 10 frame convert. I tried putting them in centers, but found out students still weren’t really grasping the concept. How to teach this concept to first graders is the topic of this article. I designed a PowerPoint to help introduce the use of 10 frames to my students.

The PowerPoint begins with a randomly dispersed group of 8 apples and an empty 10 frame. After pointing out that it is a little tough to count them when they are scattered like that, the 10 frame is introduced as a way to organize the items making them easier to count and visually chunk into larger groups making one by one counting unnecessary. The apples float into the ten frame one at a time on each mouse click. A slide asks how many apples now, then how many empty spaces are there in the 10 frame. The slide show continues with different numbers of apples, each stressing the number of empty spaces, reinforcing 10 partners. After going through all of the 10 partners, the slide show introduces and models a board game where students spin, put that number of markers in a 10 frame, then move their pawn the number of EMPTY spaces, again, reinforcing 10 partners.

Here is the sequence I use to introduce the use of ten frames and then reinforce the skill by playing the game —

## Materials

- Copies of the game board printed in gray scale on stiff paper.
- Copies of the 10 frames for each child.
- Several markers such as beans or counters.
- A pawn or other game piece to move on the board.

## Lesson Procedure

- Show the slide show “An Introduction to 10 Frames.”
- Engage students in the slide show by asking them to look for patterns and make predictions.
- Use the Think-Pair-Share model to respond to questions posed on the screen.
- Distribute game materials and monitor students while they play.
- After the game, come together again to discuss the activity. What did students notice? What if they had more than 10?

## Extensions

- In activity centers, put cookie sheet 10 Frames. (These center materials are described in the article “Dollar Store Math for the Elementary Classroom” published in the October issue of *TOMT*.)
- Put up shower organizer 10 Frame, students take turns being teacher (also described in the October issue).
- Challenge students to put 11, 12, 13 things in a 10 frame (give them more than one 10 frame).

Once the Gathering Apples game has been taught whole group through the use of the slideshow, it can be put into a center, too.

In addition to the student slide show, there is an additional slide show called Teacher Support. In this PowerPoint, teachers will find a colored master for the game board below and the 10 frames. Also included are K-1 standards; the NCTM Focal Points, the Oregon Core Standards, and the 2002 Oregon standards.

Both slide shows are available for download on the TOMT page of the OCTM website at: <http://www.octm.org/TOMT.html>.

## Gathering Apples Gameboard

