Illustrative Mathematics

K.CC Number TIC TAC TOE

Alignment 1: K.CC.A.3

The teacher will need a 3x3 grid with the numerals 1-9 arranged randomly (one in each box in the grid) and 2 different colored crayons, one for each child.

Two students each select a different color crayon and one number grid.

- a. Player A chooses and reads a number name on the grid out loud to Player B. If Player B agrees that is the correct number name, then Player A may trace the numeral with his/her crayon.
- b. Players switch roles and Player B reads a number name on the grid. If Player A agrees it has been correctly identified, then Player B traces the numeral with his/her crayon color.
- c. Repeat steps (a) and (b) until one player has three numerals traced with his/her color in a row.

The object is to identify 3 numbers in a row – horizontally, vertically or diagonally. The winning student must confirm with the teacher by being able to read to the teacher the 3 winning numbers. This will allow for autonomy during the task but provide a check that students are actually identifying the numerals correctly in conjunction with tracing them.

Commentary:

- It is important for students to name the number out loud and have a partner confirm as a way to ensure students are focused on number identification, not just tracing numerals without a connection to the number name.
- Students may need a number line to assist them in identifying a number name; you may also see students doing some "sub-vocal" counting (sort of like counting under their breath) from another number to arrive at the correct number name. This is a common student strategy that should be noted when assessing a student's facility with number identification. Students should eventually be able to identify a numeral without having to count sub-vocally and may need targeted instruction to move away from this support.
- Eventually students can write the numbers in the grids to create game boards for each other. Number writing stamps can be found at teacher material stores and can be used to students write numerals neatly. Students can stamp them and then trace them to create their own game boards. At some point students can create their own game boards without tracing, just by looking at written numbers and copying them.
- Laminating the grids and having the students use dry erase markers or crayons to write will allow the game to be re-used and not require as many copies.

Solution: Solution

Game boards can be made for 1-9, then 5-12, then 10-18 and finally 12-20. They can also be tailored specifically to a student's difficult numbers or repeat a smaller collection of numerals multiple times on a board.

Students can also play blackout and just cover the board completely. This is often easier for young students to understand initially than the "3 in a row to win" concept. If you play blackout, teams can bring the board to the teacher for verification and each student reads the numbers traced with his/her color.



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