Multiplication Table Tic-Tac-Toe

Topics: Multiplication facts, strategy
Materials: Board, two paperclips of different colors, counters in two colors
Common Core: 3.OA.7, 4.OA.4

Move your counter to cover a product. Who can get three in a row first?

Why We Love Multiplication Table Tic-Tac-Toe
This simple game is easy to learn, fun to play, and great practice for building fluency with multiplication facts.

How to Play
The game is for two players, taking turns. Each player chooses a color for their paperclip and counters. To start, player 1 places their paperclip on one of the numbers below the multiplication table; player 2 does the same, and places a counter of their color on the product of the two numbers covered by the paperclips.

On each turn afterward, players move their paperclip only to a new number below the multiplication table (from 4 to 9), multiplies the two numbers under the paperclips together, and covers the product of the table with one of their counters. The game ends when one player gets three in a row, horizontally, vertically, or diagonally.

See Example on next page.

Prompts and Questions
- How can you block them from taking that spot and winning next turn? Can you take it first?
- What do you think your opponent is going to do next turn?

Variations
Try playing 4-in-a-row instead of 3-in-a-row to win.

Tips for the Classroom
1. Use the 1 - 6 board as a simplification if students aren't ready for the larger numbers.

Example.

To start the game, Player 1 puts their paperclip on 5. Player 2 puts their paperclip on 6, and covers one of the "30" spots on the board with their color counter.

16	20	24	28	32	36
20	25	30	35	40	45
24	30	36	42	48	54
28	35	42	49	56	63
32	40	48	56	64	72
36	45	54	63	72	81

4 5 6 7 8 9

Next, player 1 moves their paperclip on 5 to 8, and covers the product of 6 and 8 on the board.

16	20	24	28	32	36
20	25	30	35	40	45
24	30	36	42	48	54
28	35	42	49	56	63
32	40	48	56	64	72
36	45	54	63	72	81

4 5 6 7 8 9

Player 2 moves their paperclip on 6 to 7, covering 56, the product of 7 and 8. This also threatens to make 3-in-a-row! Player 2 just needs to cover 42. However, Player 1 can move to block by moving their paperclip on 8 to 6. And so the game continues until someone gets 3-in-a-row.

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20	25	30	35	40	45
24	30	36	42	48	54
28	35	42	49	56	63
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36	45	54	63	72	81

4   5   6   7   8   9

Multiplication Table Tic-Tac-Toe

1	2	3	4	5	6
2	4	6	8	10	12
3	6	9	12	15	18
4	8	12	16	20	24
5	10	15	20	25	30
6	12	18	24	30	36

1　　2　　3　　4　　5　　6