Early Mathematics: Using the SMPs to Drive a Playful Math Experience

NCTM Hartford 2018



Early Mathematics: Using the SMPs to Drive a Playful Math Experience

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8 Mathematical Standards for Practice

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively.
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics.
- 5. Use appropriate tools strategically.
- 6. Attend to precision.
- 7. Look for and make use of structure.
- 8. Look for and express regularity in repeated reasoning.







A Question or a Problem

Note: This is a framework.

"What do I know?"

"What am I trying to figure out?"



Along the Track Again

Focus

Using a number track to determine relative position of numbers one to fifteen.

Materials

Each pair of players will need

- 'Along the Track Again' game board
- two (2) cubes with the following
 - o Just Before, Just After, Before, After, Before, After
 - o 7, 8, 9, 10, 11, 12

Each player will need

• eight (8) counters (a different color for each player)

Starting the Game

- The winner is the player that has the most counters on the number track.
- Decide who will be Player 1 and who will be Player 2.
- Player 1 starts the game.

How to Play

- Roll the cubes.
- Say the phrase that is rolled on the first cube and the number on the second cube, for example 'just before 7.'
- Place a counter onto your answer on the game board to claim that number.
- If the space is not available, you miss a turn.
- Play continues until a counter has been placed on each space of number track.

Example

Max rolls 'just before' and '4'. He places a counter on 3, the number just before 4. Had a counter already been placed on the number 3, Max would miss a turn.

Along the Track Again

	4	3	2	1
	5			
7	6			15
8				14
9	10	11	12	13

Mathematical Process Standard 7 Look for and make use of structure

2		1	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
3	4	•	Э	0	1	0	3	10	TT	12	12	14	12	10	1/	10	19	20
ŝ.,	3	3 4	3 4	3 4 5	3 4 5 6	3 4 5 6 /	3 4 5 6 7 8	3 4 5 6 7 8 9	3 4 5 6 7 8 9 10	3 4 5 6 7 8 9 10 11	3 4 5 6 7 8 9 10 11 12	3 4 5 6 7 8 9 10 11 12 13	3 4 5 6 7 8 9 10 11 12 13 14	3 4 5 6 7 8 9 10 11 12 13 14 15	3 4 5 6 7 8 9 10 11 12 13 14 15 16	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

•	4	3	4		0	1	•	9	10	
11	12	13	14	15	16	17	18	19	20	
21	22	23	24	25	26	27	28	29	30	
31	32	33	34	35	36	37	38	39	40	
41	42	43	44	45	46	47	48	49	50	
51	52	53	54	55	56	57	58	59	60	
61	62	63	64	65	66	67	68	69	70	
71	72	73	74	75	76	77	78	79	80	
81	82	83	84	85	86	87	88	89	90	
91	92	93	94	95	96	97	98	99	100	
					the second secon					

x	0	1	2	3	4	5	6	7	8	9
0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9
2	0	2	4	6	8	10	12	14	16	18
3	0	3	6	9	12	15	18	21	24	27
4	0	4	8	12	16	20	24	28	32	36
5	0	5	10	15	20	25	30	35	40	45
6	0	6	12	18	24	30	36	42	48	54
7	0	7	14	21	28	35	42	49	56	63
8	0	8	16	24	32	40	48	56	64	72
9	0	9	18	27	36	45	54	63	72	81

	0	1	2	2	4	5	6	7	0	0
•	U		4		4	3	0		0	3
0	0	1	2	3	4	5	6	7	8	9
1	1	2	3	4	5	6	7	8	9	10
2	2	3	4	5	6	7	8	9	10	11
3	3	4	5	6	7	8	9	10	11	12
4	4	5	6	7	8	9	10	11	12	13
5	5	6	7	8	9	10	11	12	13	14
6	6	7	8	9	10	11	12	13	14	15
7	7	8	9	10	11	12	13	14	15	16
8	8	9	10	11	12	13	14	15	16	17
9	9	10	11	12	13	14	15	16	17	18

On the Edge

Focus

Adding 1, 2, 3, 10, 20, or 30 to two-digit numbers.

Materials

Each pair of players will need

- "On the Edge" game board
- one (1) cube with the following



Each player will need

• two (2) counters (a different color for each player)

Starting the Game

- The winner is the first player to get both counters to any part of the shaded area of the game board.
- Decide who will be Player 1 and who will be Player 2.
- Players place both their counters on 1 on the game board.
- Player 1 starts the game.

How to Play

- Roll the cube.
- Follow the instructions on the cube to add 1, 2, 3, 10, 20, or 30 to the number your counter is on.
- Place a counter onto the total.
- If the space is not available, you miss a turn.
- Players can choose which of their two counters they want to use with the instructions.
- Play continues until one player has moved both of their counters into any part of the shaded area of the game board.

Example

Kay has one counter on 14 and the other counter on 51. Kay rolls +20 and chooses to add 20 to 51. She moves the counter that is on 51 down two spaces to 71.

On the Edge

Ĵ.	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	կկ	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100