

Counting pop sticks (2 & 5)

I can skip count by 2 and 5 with the support of materials.

KNP # M 4437.1 - Counting pop sticks (2 & 5), Red

Fluency Standard: 3.OA.7

Standard: 3.OA.1

Materials: Set of 12 (or more) dotted Popsicle sticks with 2 or 5 dots.

Directions:

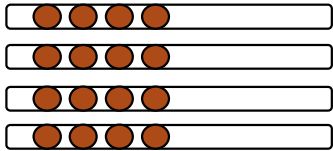
1. Use the sticks with either the 2 dots or 5 dots.
2. Player 1 will place them face up one at a time.
3. Player 2 says the new total of dots as Player 1 puts each stick down.
4. When all the sticks have been used, Player 1 will take the sticks away one at a time.
5. Player 2 will say the total of the sticks as Player 1 removes each stick.
6. Player 2 will pick up the other set of sticks and repeat as above.
7. If more than 2 players, the players can take turns telling the total of dots on the sticks.

Lesson Plan

Teacher:	Class/Group:	Date:
KNPIG ID #: M 4437.1 (Counting pop sticks (2 & 5))	Task Group Name: Pop Drop Move-It (2,5,6,7)	
AVMR Strand: Multiplication & Division	AVMR Construct Level/Color: 0 to 1 Red	
Fluency Benchmark for RTI: 3.OA.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 / 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products.		
KCAS(s): 1) 3.OA.1 Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5×7 .		KCAS Domain and Cluster: Operations and Algebraic Thinking 1) Represent and solve problems involving multiplication and division.
Learning Target: I can skip count by 2 and 5 with the support of materials.		
Setting/Materials: Set of 12 (or more) dotted Popsicle sticks with 2 or 5 dots.		
Activity: Use the sticks with either 2 dots or 5 dots. One person will place sticks out, face up, one at a time. As each stick is placed, the other student will say the new total of dots. If more than two students are playing, the remaining students should take turns saying the current total. After all sticks have been placed, remove one stick at a time, again with others taking turns to say the total. The person placing and removing the sticks should make sure that the total stated each time is correct and, if not, provide assistance or allow time for students to count the dots. Repeat with a different student placing and then picking up the sticks.		
Evidence of Learning (Diagnostic Assessment of Progress): Place out a stick with 5 dots. Ask "How many dots?" Explain that all sticks have the same number of dots. Placing out 12 sticks, one at a time, ask student to say the total number of dots. Next remove sticks one at a time. Repeat using the sticks with 2 dots.		
Teacher Notes: See print link directions to make popsicles sticks. Dot strips (included in the print link) may be used in place of the popsicle sticks. If the activity is teacher led, the teacher may prefer to place and pick up sticks while calling on students to say the current total. Students may initially need to count by ones to determine the total. The teacher may choose to pause the counting and instead engage students in a discussion about the number of groups (i.e. number of sticks) and the size of the groups (i.e. number of dots on each stick). The activity should be repeated over time until students are able to skip count easily and may be used as a warm-up to more advanced activities in this task group and for other multiplication activities.		

Dotted Popsicle Sticks

To create a set of dotted popsicle sticks, use a permanent marker to draw dots at one end of each stick. Space dots carefully so that if sticks are arranged as shown, an array is formed. A set usually consists of 10-15 sticks with the same number of dots.



Sticks may be used to support skip counting or with various multiplication games.

Pop Drop Sticks

Students will drop a collection (approximately 10-15) sticks with the same number of dots. Students will determine the number of sticks that landed facing up and the number of dots that are visible. For a more advanced activity, students could instead determine the number of sticks and the number of dots that are facing down.

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Pop Drop Move-It (2 & 5)

I can determine products involving a factor of 2 or 5 with support of materials.

KNP # M 4437.2 - Pop Drop Move-It (2 & 5), Blue
Fluency Standard: 3.OA.7
Standard: 3.OA.1, 3.OA.7

Materials: Set of 10 dotted popsicle sticks with 2 or 5 dots, Pop Drop Move-It game board (multiples of 2 and 5), recording sheets.

Directions:

1. Get the set of sticks with 2 dots, the set with 5 dots and the game board.
2. Each player will get exactly 8 counters.
3. Take turns. On a player's turn, the player will:
 1. Choose either the 2 dot or the 5 dot sticks and drop them.
 2. Determine the number of dots that are **face-up** and cover that number on the board.
4. If a player gets a number that is not available but is covered by the other player, he/she can tell the player to “move it” and put his/her counter on that number.
5. The first player to use all of his/her counters wins.

Lesson Plan

Teacher:	Class/Group:	Date:
KNPIG ID #: M 4437.2 (Pop Drop Move-It (2 & 5))	Task Group Name: Pop Drop Move-It (2,5,6,7)	
AVMR Strand: Multiplication & Division	AVMR Construct Level/Color: 1 to 2 Blue	
Fluency Benchmark for RTI: 3.OA.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 / 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products.		
KCAS(s): 1) 3.OA.1 Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5×7 . 2) 3.OA.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 / 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.		KCAS Domain and Cluster: Operations and Algebraic Thinking 1) Represent and solve problems involving multiplication and division. 2) Multiply and divide within 100.
Learning Target: I can determine products involving a factor of 2 or 5 with support of materials.		
Setting/Materials: Set of 10 dotted popsicle sticks with 2 or 5 dots, Pop Drop Move-It game board (multiples of 2 and 5), recording sheets.		
Activity: Pop Drop Move-It (2 & 5 version): Play Move-It according to standard directions. On a player's turn, the player may choose to drop EITHER the set of sticks with 2 dots or with 5 dots. The player will determine the number of dots that are visible (i.e. face-up) and cover that number on the board. For example, if the player drops the 5 sticks and 4 are face up, the player will cover a 20 on the game board.		
Evidence of Learning (Diagnostic Assessment of Progress): Place out a stick with 5 dots. Ask "How many dots?" Explain that all sticks have the same number of dots. Place 7 sticks, face up, in a scattered configuration. Ask student, "How many dots?". Repeat process using 8 2-dot sticks.		
Teacher Notes: Dot strips available in the print link for M 437.1 may be used in place of popsicle sticks. The activity as described at the M 437.1 level can be used as a warm-up. Optionally, students may be asked to record their turns on one of the included recording sheets. A student playing this game may be partnered with a student playing the game as described in entry M 437.3. The blank Move-It game board (included in the print link) can be used to create customized variations. For example, a board containing only the multiples of 5 can be used with the 5-dot sticks to create a game targeting only the 5-facts.		

POP DROP MOVE -IT

Multiplication with 2 & 5

Each player will start with 8 translucent counters in a single color. On your turn, choose if you wish to drop the sticks with 2 dots or the sticks with 5 dots. Drop the sticks, determine the number of dots that are showing and cover that number. If the number is already covered by another player, tell the other player to "move it" and cover the number with your own counter. If the number is not on the board, lose a turn. The first player to use all of his or her counters wins the game. Players may increase the challenge by covering the number of dots that are hidden (i.e. dots on the sticks that are face-down) instead of the number of dots that are showing.

12	40	10	35
4	10	20	30
8	30	25	10
6	15	8	25
14	20	16	12

Materials:

Popsicle sticks (or Dot strips) with 2 or 5 dots, 10 each.

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Pop Drop Move-It

Name: _____

Number of Sticks <i>Factor</i>		Number of Dots on each stick <i>Factor</i>		Total number of Dots <i>Product</i>
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____

Pop Drop Move-It

Name: _____

Total number of Dots <i>Product</i>		Number of Sticks <i>Factor</i>		Number of Dots on each stick <i>Factor</i>
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____

Pop Drop Move-It (2 & 5)

I can determine products involving a factor of 2 or 5 with support of materials.

KNP # M 4437.3 - Pop Drop Move-It (2 & 5), Green

Fluency Standard: 3.OA.7

Standard: 3.OA.1, 3.OA.7

Materials: Set of 10 dotted popsicle sticks with 2 or 5 dots, Pop Drop Move-It game board (multiples of 2 and 5), recording sheets.

Directions:

1. Get the set of sticks with 2 dots, the set with 5 dots and the game board.
2. Each player gets exactly 8 counters.
3. Take turns. On a player's turn, the player will:
 1. Choose either the 2 dot or the 5 dot sticks and drop them.
 2. Determine the number of dots that are **face-down** and cover that number on the board.
4. If a player gets a number that is already covered by the other player, he/she can tell the player to “move it” and put his/her counter on that number.
5. The first player to use all of his/her counters wins.

Lesson Plan

Teacher:	Class/Group:	Date:
KNPIG ID #: M 4437.3 (Pop Drop Move-It (2 & 5))		Task Group Name: Pop Drop Move-It (2,5,6,7)
AVMR Strand: Multiplication & Division		AVMR Construct Level/Color: 2 to 3 Green
Fluency Benchmark for RTI: 3.OA.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 / 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products.		
KCAS(s): 1) 3.OA.1 Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5×7 . 2) 3.OA.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 / 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.		KCAS Domain and Cluster: Operations and Algebraic Thinking 1) Represent and solve problems involving multiplication and division. 2) Multiply and divide within 100.
Learning Target: I can determine products involving a factor of 2 or 5 with support of materials.		
Setting/Materials: Set of 10 dotted popsicle sticks with 2 or 5 dots, Pop Drop Move-It game board (multiples of 2 and 5), recording sheets.		
Activity: Pop Drop Move-It (2 & 5 version): Play Move-It according to standard directions. On a player's turn, the player may choose to drop EITHER the set of sticks with 2 dots or with 5 dots. The player will determine the number of dots that are hidden (i.e. face down) and cover that number on the board. For example, if the player drops the 5 sticks and 4 are face down, the player will cover a 20 on the game board. Players may be asked to record work on the included recording sheet.		
Evidence of Learning (Diagnostic Assessment of Progress): Place out a stick with 5 dots. Ask "How many dots?" Explain that all sticks have the same number of dots. Place 8 sticks, face down in a scattered configuration. Ask student, "How many dots?". Repeat process using 6 2-dot sticks.		
Teacher Notes: Dot strips available in the print link for M 4437.1 may be used in place of popsicle sticks. The activity as described at the M 4437.1 level can be used as a warm-up. The warm-up may be modified so that students are counting as sticks are placed with the dots face down. A student playing this game may be partnered with a student playing the game as described in entry M 437.2. Optionally, students may be asked to record their turns on one of the included recording sheets. The blank Move-It game board (included in the print link) can be used to create customized variations. For example, a board containing only the multiples of 5 can be used with the 5-dot sticks to create a game targeting only the 5-facts.		

POP DROP MOVE -IT

Multiplication with 2 & 5

Each player will start with 8 translucent counters in a single color. On your turn, choose if you wish to drop the sticks with 2 dots or the sticks with 5 dots. Drop the sticks, determine the number of dots that are showing and cover that number. If the number is already covered by another player, tell the other player to "move it" and cover the number with your own counter. If the number is not on the board, lose a turn. The first player to use all of his or her counters wins the game. Players may increase the challenge by covering the number of dots that are hidden (i.e. dots on the sticks that are face-down) instead of the number of dots that are showing.

12	40	10	35
4	10	20	30
8	30	25	10
6	15	8	25
14	20	16	12

Materials:

Popsicle sticks (or Dot strips) with 2 or 5 dots, 10 each.

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Pop Drop Move-It

Name: _____

Number of Sticks <i>Factor</i>		Number of Dots on each stick <i>Factor</i>		Total number of Dots <i>Product</i>
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____

Pop Drop Move-It

Name: _____

Total number of Dots <i>Product</i>		Number of Sticks <i>Factor</i>		Number of Dots on each stick <i>Factor</i>
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____

Multiplication Move-It (2 & 5)

I can determine products involving a factor of 2 or 5.

KNP # M 4437.4 - Multiplication Move-It (2 & 5), Purple
Fluency Standard: 3.OA.7
Standard: 3.OA.7

Materials: Multiplication Move-It game board (multiples of 2 and 5), spinner (0-9) and spinner (2,5) and recording sheets

Directions:

1. Get game board, counters and spinners.
2. Player 1 will spin both spinners and cover the product on the game board.
3. Player 2 will spin both spinners and cover the product on the game board.
4. Players take turns.
5. If a player gets a number that is already covered by the other player, he/she can tell the player to “move it” and put his/her counter on that number.
6. The first player to use all of his/her counters wins.

Lesson Plan

Teacher:	Class/Group:	Date:
KNPIG ID #: M 4437.4 (Multiplication Move-It (2 & 5))		Task Group Name: Pop Drop Move-It (2,5,6,7)
AVMR Strand: Multiplication & Division		AVMR Construct Level/Color: 3 to 4 Purple
Fluency Benchmark for RTI: 3.OA.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 / 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products.		
KCAS(s): 1) 3.OA.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 / 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.		KCAS Domain and Cluster: Operations and Algebraic Thinking 1) Multiply and divide within 100.
Learning Target: I can determine products involving a factor of 2 or 5.		
Setting/Materials: Multiplication Move-It game board (multiples of 2 and 5), spinner (0-9) and spinner (2,5), recording sheets		
Activity: Multiplication Move-It (2 & 5 version): Play Move-It according to standard directions. On a player's turn, the player will spin both spinners and cover the product. Players may be asked to record work on the recording sheet.		
Evidence of Learning (Diagnostic Assessment of Progress): Ask student "What is 8×5 ?". Continue with 7×2 , 6×5 and other tasks involving multiplication with 5 or 2.		
Teacher Notes: Spinners are included in the print link. However, spinners may be replace by a 0-9 die combined with a 6 sided cube labeled with three "2"s and three "5"s. The blank Move-It game board (included in the print link) can be used to create customized variations.		
Printables Link: http://knp.kentuckymathematics.org/knp/uploads/printables_4437.4M.pdf		
Student Instructions Link:		

MULTIPLICATION MOVE -IT

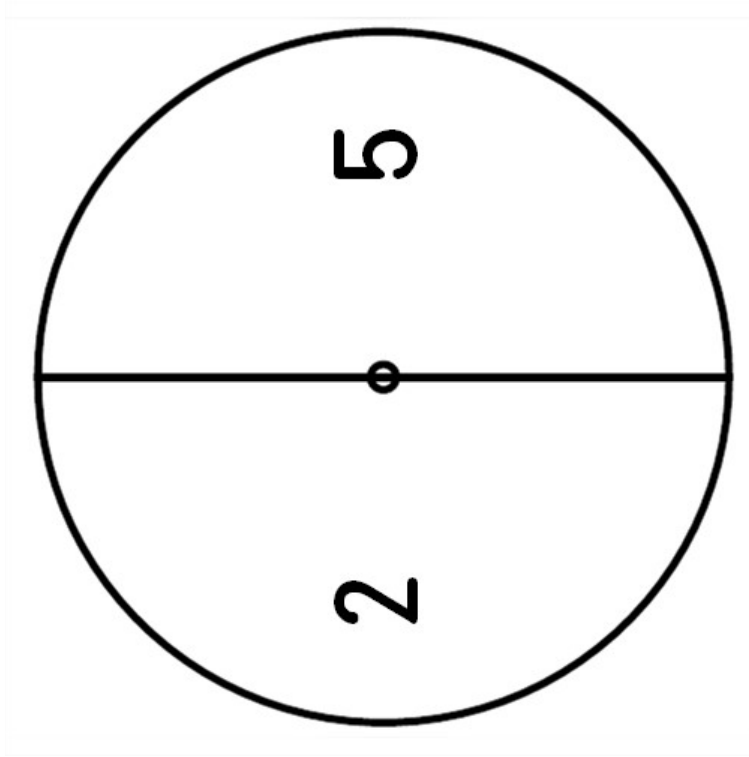
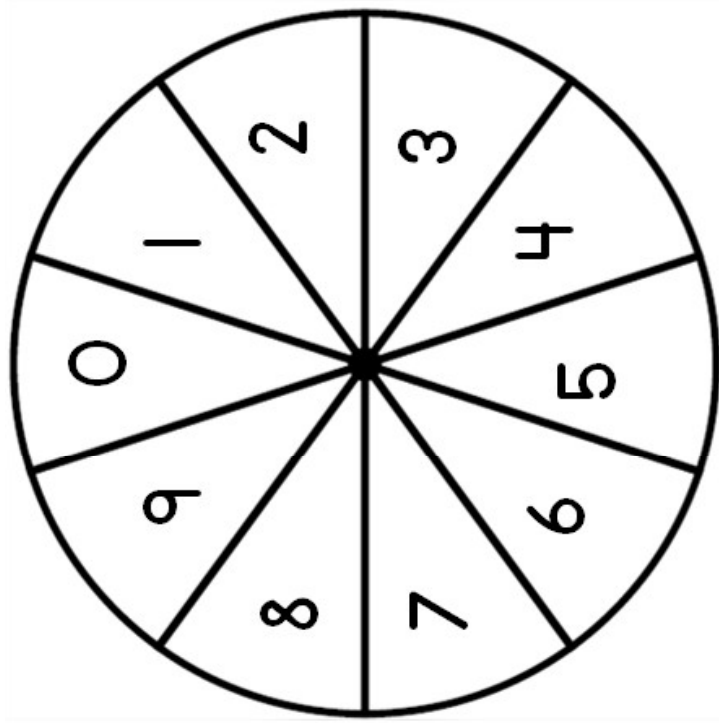
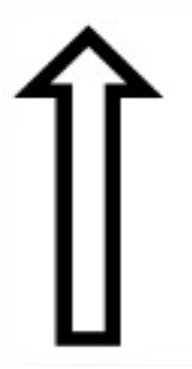
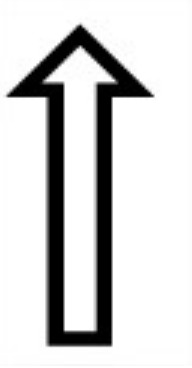
Multiplication with 2 & 5

Each player will start with 8 translucent counters in a single color. On your turn, spin the spinners and determine the product. If the product is already covered by another player, tell the other player to "move it" and cover the number with your own counter. The first player to use all of his or her counters wins the game.

5	16	15	0
2	45	30	0
10	4	18	35
12	20	6	10
40	14	25	8

Materials:

Spinner (0-9) and Spinner (2 & 5)



Use paper clips or the paper arrows with fasteners to make the spinners.

Or

Place a transparent overhead spinner over each circle.

Pop Drop Move-It

Name: _____

<i>Factor</i>		<i>Factor</i>		<i>Product</i>
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____
_____	X	_____	=	_____

Pop Drop Move-It

Name: _____

<i>Product</i>	=	<i>Factor</i>	X	<i>Factor</i>
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____
_____	=	_____	X	_____

Pop Drop Move-It (6 or 7)

**I can determine products involving a factor of
6 or 7.**

KNP # M 4437.5 - Pop Drop Move-It (6 or 7), PINK

Fluency Standard: 3.OA.7

Standard: 3.OA.5, 3.OA.7

Materials:

Set of 12 dotted popsicle sticks with 5 red dots and 1 blue dot on each stick, Pop Drop Move-It (multiples of 6) game board, multiples of 6 recording sheets

OR

Set of 12 dotted sticks with 5 red and 2 blue dots on each stick, Pop Drop Move-It (multiples of 7) game board and multiples of 7 recording sheets

Directions:

1. Chose if you are working on multiples of 6 or 7. Get the matching game board, recording sheet, and sticks. Each player gets 8 counters.
2. Player 1 will drop the 10 sticks and say how many red dots are face down, how many blue dots are face down and how many dots are hidden in all, and record on the recording sheet.
3. Player 1 will cover the number of hidden dots in all on the game board.
4. Player 2 will do the same as Player 1
5. Players take turns.
6. If a player gets a number that is already covered by the other player, he/she can tell the player to “move it” and put his/her counter on that number.
7. The first player to use all of their counters wins.

Lesson Plan

Teacher:	Class/Group:	Date:
KNPIG ID #: M 4437.5 (Pop Drop Move-It (6 or 7))		Task Group Name: Pop Drop Move-It (2,5,6,7)
AVMR Strand: Multiplication & Division		AVMR Construct Level/Color: 4 to 5 #EC1AB5
Fluency Benchmark for RTI: 3.OA.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 / 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products.		
KCAS(s): 1) 3.OA.5 Apply properties of operations as strategies to multiply and divide. Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $3 \times 10 = 30$. (Associative property of multiplication.) Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find 8×7 as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$. (Distributive property.) 2) 3.OA.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 / 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.		KCAS Domain and Cluster: Operations and Algebraic Thinking 1) Understand properties of multiplication and the relationship between multiplication and division. 2) Multiply and divide within 100.
Learning Target: I can determine products involving a factor of 6 or 7.		
Setting/Materials: Set of 12 dotted popsicle sticks with 5 red dots and 1 blue dot on each stick, Pop Drop Move-It (multiples of 6) game board, multiples of 6 recording sheets, OR set of 12 dotted sticks with 5 red and 2 blue dots on each stick, Pop Drop Move-It (multiples of 7) game board and multiples of 7 recording sheets		
Activity: Pop Drop Move-It: Choose either Move-It (6) or Move-It (7) and use the corresponding sticks and recording sheet. Play Move-It according to standard directions. On a player's turn, the player will drop the sticks, say how many red dots are hidden (i.e. face down), how many blue dots are hidden and how many dots are hidden in all and record the answers on the recording sheet. The player will cover the number corresponding to the total number of dots on the game board.		
Evidence of Learning (Diagnostic Assessment of Progress): Ask student "What is 4×6 ?" Continue with 8×6 , 6×7 and so on.		
Teacher Notes: Students should start with the 6 version. Look for students to build on the known multiples of 5. For example, to work 8×6 , a student can use the known fact $8 \times 5 = 40$ to quickly determine the product is 48 (i.e. $40 + 8$). The blank Move-It game board (included in the print link) can be used to create customized variations.		

POP DROP MOVE -IT

Multiplication with 6

Each player will start with 8 translucent counters in a single color. On your turn, drop the sticks with 6 dots (5 red and 1 blue). Determine the number of dots that are face down that are red, how many are blue and how many altogether. Cover the total number. If the number is not available and is covered by another player, tell the other player to "move it" and cover the number with your own counter. The first player to use all of his or her counters wins the game.

36	42	54	36
12	42	30	56
24	48	60	48
18	30	24	48
42	54	48	60

Materials:

Popsicle sticks or Dot strips with 6 dots (5 red & 1 blue), 12 each.

POP DROP MOVE -IT

Multiplication with 7

Each player will start with 8 translucent counters in a single color. On your turn, drop the sticks with 7 dots (5 red and 2 blue). Determine the number of dots that are face down that are red, how many are blue and how many altogether. Cover the total number. If the number is not available and is covered by another player, tell the other player to "move it" and cover the number with your own counter. The first player to use all of his or her counters wins the game.

42	49	63	42
14	49	35	63
28	49	70	56
21	35	28	56
49	63	56	70

Materials:

Popsicle sticks or Dot strips with 7 dots (5 red & 2 blue), 12 each.

Pop Drop Move-It (6)

Name: _____

Red Dots	Blue Dots	Total Dots
$\underline{\quad} \times 5 = \underline{\quad}$	$\underline{\quad} \times \underline{\quad} = \underline{\quad}$	$\underline{\quad} \times 6 = \underline{\quad}$
$\underline{\quad} \times 5 = \underline{\quad}$	$\underline{\quad} \times \underline{\quad} = \underline{\quad}$	$\underline{\quad} \times 6 = \underline{\quad}$
$\underline{\quad} \times 5 = \underline{\quad}$	$\underline{\quad} \times \underline{\quad} = \underline{\quad}$	$\underline{\quad} \times 6 = \underline{\quad}$
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$\underline{\quad} \times 5 = \underline{\quad}$	$\underline{\quad} \times \underline{\quad} = \underline{\quad}$	$\underline{\quad} \times 6 = \underline{\quad}$
$\underline{\quad} \times 5 = \underline{\quad}$	$\underline{\quad} \times \underline{\quad} = \underline{\quad}$	$\underline{\quad} \times 6 = \underline{\quad}$
$\underline{\quad} \times 5 = \underline{\quad}$	$\underline{\quad} \times \underline{\quad} = \underline{\quad}$	$\underline{\quad} \times 6 = \underline{\quad}$
$\underline{\quad} \times 5 = \underline{\quad}$	$\underline{\quad} \times \underline{\quad} = \underline{\quad}$	$\underline{\quad} \times 6 = \underline{\quad}$

Pop Drop Move-It (7)

Name: _____

Red Dots	Blue Dots	Total Dots
$\underline{\quad} \times 5 = \underline{\quad}$	$\underline{\quad} \times 2 = \underline{\quad}$	$\underline{\quad} \times 7 = \underline{\quad}$
$\underline{\quad} \times 5 = \underline{\quad}$	$\underline{\quad} \times 2 = \underline{\quad}$	$\underline{\quad} \times 7 = \underline{\quad}$
$\underline{\quad} \times 5 = \underline{\quad}$	$\underline{\quad} \times 2 = \underline{\quad}$	$\underline{\quad} \times 7 = \underline{\quad}$
$\underline{\quad} \times 5 = \underline{\quad}$	$\underline{\quad} \times 2 = \underline{\quad}$	$\underline{\quad} \times 7 = \underline{\quad}$
$\underline{\quad} \times 5 = \underline{\quad}$	$\underline{\quad} \times 2 = \underline{\quad}$	$\underline{\quad} \times 7 = \underline{\quad}$
$\underline{\quad} \times 5 = \underline{\quad}$	$\underline{\quad} \times 2 = \underline{\quad}$	$\underline{\quad} \times 7 = \underline{\quad}$
$\underline{\quad} \times 5 = \underline{\quad}$	$\underline{\quad} \times 2 = \underline{\quad}$	$\underline{\quad} \times 7 = \underline{\quad}$
$\underline{\quad} \times 5 = \underline{\quad}$	$\underline{\quad} \times 2 = \underline{\quad}$	$\underline{\quad} \times 7 = \underline{\quad}$
$\underline{\quad} \times 5 = \underline{\quad}$	$\underline{\quad} \times 2 = \underline{\quad}$	$\underline{\quad} \times 7 = \underline{\quad}$

Missing Factor Move-It

I can solve missing factor equations where one factor is 6 or 7.

KNP # M 4437.6 - Missing Factor Move-It, Orange

Fluency Standard: 3.OA.7

Standard: 3.OA.4, 3.OA.6

Materials: Move-It game board (numbers 1 through 10), popsicle sticks or cards containing missing factor expressions where either 6 or 7 is the other factor. (e.g. $__ \times 6 = 24$ or $24 = 6 \times __$)

Optional: Missing factor expressions may be replaced by division expressions where the quotient is a whole number between 1 & 10 (e.g. $24 \div 6$).

Directions:

1. Get game board, counters and sticks. Place the sticks in a cup with the equation down in the cup.
2. Player 1 will draw one stick from the cup, solve for the missing factor and cover the number on the game board. Player 1 will return the stick to the cup.
3. Player 2 will do the same as Player 1.
4. Players take turns.
5. If a player gets a number that is already covered by the other player, he/she can tell the player to “move it” and put his/her counter on that number.
6. The first player to use all of his/her counters wins.

If using cards, shuffle cards and place in a stack face-down. On a player's turn, the player will draw a card.

Lesson Plan

Teacher:	Class/Group:	Date:
KNPIG ID #: M 4437.6 (Missing Factor Move-It)		Task Group Name: Pop Drop Move-It (2,5,6,7)
AVMR Strand: Multiplication & Division		AVMR Construct Level/Color: 5+ Orange
<p>Fluency Benchmark for RTI: 3.OA.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 / 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products.</p>		
<p>KCAS(s): 1) 3.OA.4 Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48$, $5 = \text{????} / 3$, $6 \times 6 = ?$. 2) 3.OA.6 Understand division as an unknown-factor problem. For example, find $32 / 8$ by finding the number that makes 32 when multiplied by 8.</p>		<p>KCAS Domain and Cluster: Operations and Algebraic Thinking 1) Represent and solve problems involving multiplication and division. 2) Understand properties of multiplication and the relationship between multiplication and division.</p>
<p>Learning Target: I can solve missing factor equations where one factor is 6 or 7.</p>		
<p>Setting/Materials: Move-It game board (numbers 1 through 10), popsicle sticks where each is labeled with one equation from the following list: ($_ \times 6 = 6$, $_ \times 6 = 12$, $_ \times = 60$, $_ \times 7 = 7$, $_ \times 7 = 14$, $_ \times 7 = 70$).</p>		
<p>Activity: Missing Factor Move-It: Play Move-It according to standard directions. Sticks may be placed in a cup for game play. On a player's turn, the player will randomly draw 1 stick, solve for the missing number and cover the number. The stick should be returned to the cup or draw pile before the next player's turn.</p>		
<p>Evidence of Learning (Diagnostic Assessment of Progress): Show student the equation "$_ \times 7 = 42$" and say "Read this to me. What goes in the blank?" Repeat with similar equations.</p>		
<p>Teacher Notes: Missing Factor cards are included in the print link and may be used in place of the popsicle sticks. The teacher may choose to make missing factor sticks targeting different numbers such as 5 (i.e. $_ \times 5 = 5$, $_ \times 5 = 10$ and so on) or label sticks with division expressions (e.g., $18?6$). Dotted sticks may be used to check or work out solutions. For example, if solving $_ \times 6 = 24$, student may set out 4 sticks (with 6 dots each) to verify the missing factor is 4. The blank Move-It game board (included in the print link) can be used to create customized variations.</p>		
<p>Printables Link: http://knp.kentuckymathematics.org/knp/uploads/printables_4437.6M.pdf</p>		

Missing Factor MOVE -IT

Each player will start with 8 translucent counters in a single color. Place missing factor sticks in a cup or face down in a draw pile. (If using cards, place cards face-down in a pile.) On your turn, chose a stick (or a card), solve for the missing factor and cover that number. If the number is not available and is covered by another player, tell the other player to "move it" and cover the number with your own counter. The first player to use all of his or her counters wins the game.

9	8	3	2
3	1	4	4
5	9	2	6
10	7	1	8
10	6	5	7

Materials:

Missing Factor equation sticks where the missing factor is in the range 1 through 10

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DIVISION MOVE -IT

Optional Division cards for M 437.6

These cards may be used in place of popsicle sticks labeled with the same expressions.

$_ \times 6 = 6$	$_ \times 6 = 12$	$_ \times 6 = 18$
$_ \times 6 = 24$	$_ \times 6 = 30$	$_ \times 6 = 36$
$_ \times 6 = 42$	$_ \times 6 = 48$	$_ \times 6 = 54$
$_ \times 6 = 60$		$_ \times 7 = 7$
$_ \times 7 = 14$	$_ \times 7 = 21$	$_ \times 7 = 28$
$_ \times 7 = 35$	$_ \times 7 = 42$	$_ \times 7 = 49$
$_ \times 7 = 56$	$_ \times 7 = 63$	$_ \times 7 = 70$

$6 = \underline{\quad} \times 6$	$12 = \underline{\quad} \times 6$	$18 = \underline{\quad} \times 6$
$24 = \underline{\quad} \times 6$	$30 = \underline{\quad} \times 6$	$36 = \underline{\quad} \times 6$
$42 = \underline{\quad} \times 6$	$48 = \underline{\quad} \times 6$	$54 = \underline{\quad} \times 6$
$60 = \underline{\quad} \times 6$		$7 = \underline{\quad} \times 7$
$14 = \underline{\quad} \times 7$	$21 = \underline{\quad} \times 7$	$28 = \underline{\quad} \times 7$
$35 = \underline{\quad} \times 7$	$42 = \underline{\quad} \times 7$	$49 = \underline{\quad} \times 7$
$56 = \underline{\quad} \times 7$	$63 = \underline{\quad} \times 7$	$70 = \underline{\quad} \times 7$

MOVE -IT

Each player will start with 8 translucent counters in a single color. On your turn, play as directed and cover the resulting number. If the number is already covered by another player, tell the other player to "move it" and cover the number with your own counter. The first player to use all of his or her counters wins the game.

Teacher Note: Fill the game board with numbers of your own choosing to create a customized Move-It game board.

Materials: