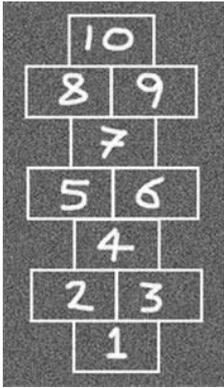


MULTIPLICATION HOPSCOTCH

Level	3 (Age group 11 – 14)
Resources Required	Chalk Pebble or small rock
Strand Covered	Number and Operations
Targeted Skills	prime factorization, exponents
Inspired by	Third Space Learning
Time Required	15 minutes for the game 5 minutes for preparation
Previous Learning Required	Multiples of 4,5,7,8,9 exponents and square roots
Support Required	Medium support

Rules of the Game:

Goal	The player who scores the most points at the end of the game wins.
Rules	<ul style="list-style-type: none"> • Each player only gets one chance to throw the pebble. • The number of points they get, is determined by the answer to their exponent/square root. So, if their answer is 4 and they successfully complete the hopscotch , they get 4 points. • If the player lands their feet on the square with the pebble, they do not get the points • If the player loses balance when collecting the pebble, they do not get the points • If the wrong multiple is called out, the player does not get the points
Steps	<p>Step 1: each player writes down 5 different multiples of any one of the following numbers: 4, 5, 7, 8, 9. (for example: $4 \times 4 \times 4 = 64$) each multiple should be written on a small piece of paper and folded. there should be 25 pieces</p> <p>Step 2: players will draw out the grid on the ground (the numbers will be written on the squares on the ground in ascending order)</p> <p>Step 3: In turns, players will pick 10 pieces of the numbered papers at random</p> <p>Step 4: player 1 tosses the pebble and hops to the square it lands on. If the number is a perfect square number, player 1 should shout out the square root. If it is not a perfect square, he/she should factorize it, providing at least 2 prime factors OR give its cube. For example, if a player lands on 81, he or she should answer “9”. If he/she lands on 20, he/she can either answer $2 \times 2 \times 5$ (prime factorization) OR 8000 (cube)</p>

	<p>players get 1 point each for every right answer, provided that they take no longer than 10 seconds to answer</p> <ul style="list-style-type: none"> - they need to bring the pebble back on their way back - player will take turns and the one with the most points at the end wins
<p>Images or Illustrations</p>	<p>Hopscotch squares:</p> 
<p>Variations of the Game</p>	<ol style="list-style-type: none"> 1. This game can be played again with different multiples. For example, 2,3,4,5,6,8,9, 10, 11 and 12. 2. The players are required to call out the name of the number before they throw the pebble. For example, if the round is on the 6 times table, player 2 says "6x2 is 12" so they are required to throw their pebble onto square 2. If it does not land on square 2, they do not get the points and their turn is lost
<p>Simplification</p>	<ol style="list-style-type: none"> 1. Instead of not allowing the players to land on the square with the pebble, they are now allowed to 2. If the wrong answer is called out, the players are allowed one more try