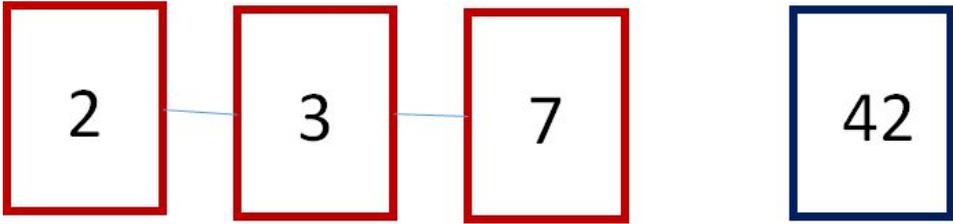


FACTOR THAT

Level	2 (Age group 8-10)
Resources Required	Notecards with numbers on it Paper Pencil
Alternate Options for the Resources	Players to make 15 notecards with the following composite numbers: 10, 14, 15, 21, 22, 25, 28, 33, 35, 42, 44, 55, 77, 90 and 99 Players to make another set of prime factor notecards with 2, 3, 5, 7 and 11. The number of prime cards needed will depend on the number of players. There needs to be 2 sets of prime cards per player, i.e. 2 cards of 2, 2 cards of 3 per player, etc.
Strand Covered	Numbers & Operations
Targeted Skills	Recognize Prime Factors
Inspired by	Study.com
Time Required	15 minutes for the game 15 minutes to make the cards
Previous Learning Required	Prime numbers Composite numbers Factors and Multiplication
Support Required	Medium support

Rules of the Game:

Goal	After three rounds, the player that is able to break the most number of composite numbers into prime factors using the cards dealt to them wins
Rules	Once a card with a composite number is drawn, it cannot be swapped out Points system per round: <ul style="list-style-type: none"> - For every composite card accurately solved, the player gets 2 points - For every composite card discarded, the player gets - 1 point <p>Each game will have 3 rounds of play and, at each round, the prime factor cards are collected, shuffled and re-dealt.</p> <p>Each player can decide how many composite notecards to pick up and discard per round</p> <p>Players can chose when they want to pause play for the round and then for cards to be reshuffled and redealt</p>
Steps	Step 1: The composite notecards are placed in the middle of the players

	<p>Step 2: The prime number cards are shuffled and random 10 cards will be dealt to each of the players</p> <p>Step 3: Each player picks 1 composite number card from the pile in the center</p> <p>Step 4: The players will try and break down the composite number into its prime factors using the 12 cards in their hand.</p> <p>Step 5: The players will place down the prime factor cards and composite cards that are used and then continue to pick up a new composite card or pause play</p> <p>For example:</p> <ul style="list-style-type: none"> - If player 1 has the prime number cards (3, 7, 2, 2, 3, 3, 7, 11, 5, 11), if they pick up composite card 35 - Player 1 will need to use the prime note cards 5×7 - Player 1 will pick another composite card and try to break that into the prime factors using the remaining cards in their hand. For example: if player 1 with remaining prime number cards (3, 7, 2, 2, 3, 3, 11, 11) now get the composite card 42 - Player 1 can use the remaining prime note cards $7 \times 3 \times 2$ - Player 1 will pick another composite card and try to break that into the prime factors using the remaining cards in their hand. For example: if player 1, with remaining prime number cards (2, 3, 3, 11, 11), now gets the composite card 25, player 1 does not have the prime number cards to make the factors and can either choose to discard this composite card to get a negative point and pick up another card or pause the play for the this round <p>Step 6: The round is over when all the players have paused play and the cards are then all collected, shuffled and redealt for another round of play. The score is calculated at the end of each round by the players</p>
<p>Images or Illustrations</p>	<p>Example of the prime cards for the composite number card 42:</p> 
<p>Enrichment</p>	<p>This game can include more prime numbers and composite numbers to make it more complex and each round can have a certain time</p>
<p>Simplification</p>	<ol style="list-style-type: none"> 1. The learners group up, so they decide collectively decide the factors 2. Composite numbers from 1-30 are chosen and only prime numbers 2, 3, 5 are used.

