

## PLACE VALUE PROBABILITY

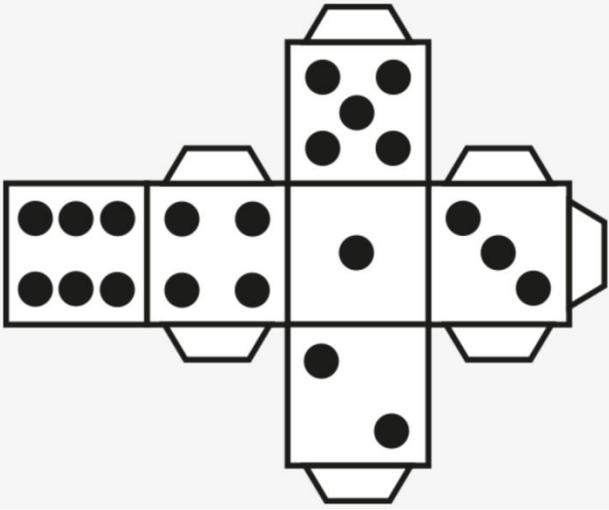
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<b>Level</b>	2 (Age group 8-10)
<b>Resources Required</b>	Paper Place Value Chart Pen and pencil Dice (1 per pair of students)
<b>Alternate Options for the Resources</b>	Student can make the dice by (See Images/Illustrations section): <ol style="list-style-type: none"> <li>1. Drawing 4 equal sized squares horizontally.</li> <li>2. Drawing 2 squares above and below the 2<sup>nd</sup> square on the horizontal line draw in step 1.</li> <li>3. Cutting along the outer edge of the shape and folding along the edges to form a cube.</li> <li>4. Use an adhesive on the flaps to stick the edges together.</li> <li>5. On each face draw dots to represent numbers from 1-6. Use the example in the Images/Illustrations section to determine where each number should go.</li> </ol>
<b>Strand Covered</b>	Numbers and Operations
<b>Targeted Skills</b>	Place value of 4 digit numbers
<b>Inspired by</b>	<a href="#">Teacher Thrive</a> - Melissa
<b>Time Required</b>	10 minutes for the game 30 minutes (setup)
<b>Previous Learning Required</b>	Knowledge of numbers 1-10,000
<b>Support Required</b>	Medium supervision

### Rules of the Game:

<b>Goal</b>	The student with the largest number on the place value chart wins
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<b>Steps</b>	<p>Step 1: The teacher/adult/facilitator creates groups of 2 students. If there is an odd number, this game can also be played with a group of 3 students.</p> <p>Step 2: The teacher hands out one die per pair. If the teacher does not have enough dice for all of the students, this is the time when students can make their own dice out of paper (See Images/Illustrations).</p> <p>Step 3: Each student makes a place value chart like in the Images/Illustrations section.</p> <p>Step 4: Students take turns rolling the die. They can place the number they roll in any empty space on their place value chart (e.g. units, tens, hundreds, or thousands).</p> <p>Step 5: After each student has made a 4-digit number, the game is over. The student with the largest number wins the round.</p> <p>Step 6: Students start a new round and repeat Steps 4-5. Students continue to play until time is up. The student who has won the most rounds when time is up wins the game.</p>
<b>Images or Illustrations</b>	

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<p><b>Enrichment</b></p>	<ul style="list-style-type: none"> <li>● Play this game with 5 digit numbers. Students will need to create Place Value charts with a column on the left for the “Ten Thousands” place.</li> <li>● Let students choose their own numbers for their dice. Allow students to use any numbers from 0-9.</li> </ul>												
<p><b>Simplification</b></p>	<ul style="list-style-type: none"> <li>● Play this game with only 2 or 3 digit numbers. Students should create Place Value charts accordingly.</li> <li>● Have students create dice that use the numbers 1, 1, 2, 2, 3, and 3 instead of the standard die.</li> </ul>												