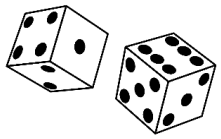
OOO Dice

(Order of Operations game)



Materials:

- Dice (3-5)
- Pencils and paper or individual white boards
- Score card (1 per group)
- Group of 2-4 students
- Timekeeper, timer or clock

Directions:

1. Count the number of letters in your first name. The player with the most letters in their first name will roll the dice first. If there's a tie, compare the number of letters in your last name.
2. Everyone in the group uses the numbers rolled to create an expression. Your goal in the first round is to make an expression with the LARGEST possible value. You must use all of the numbers rolled and any operations (multiplication, division, addition, subtraction) as well as fractions, parentheses, exponents, or absolute value. But you can only use each operation or grouping symbol ONCE in your expression. You will have 2 minutes to try different combinations to find the LARGEST possible value. Remember, you must use the Order of Operations correctly when finding the value of your expression.
3. When time is up, take turns sharing your expressions with the group. Check each other to make sure the expressions are simplified correctly. The player with the LARGEST correct value wins this round. Find the difference between the winning value and the next largest value, and give the winner the number of points equal to the difference. Record the winner's name and points on the score card.
    - Example: If the winner's value is 50 and the next closest value is 40, then the winner gets 10 points.
4. Now use the same numbers to make a new expression with the SMALLEST possible value. You must use all of the numbers rolled and any operations (multiplication, division, addition, subtraction) as well as fractions, parentheses, exponents, or absolute value. But you can only use each operation or grouping symbol ONCE in your expression. You will have 2 minutes to try different combinations to find the SMALLEST possible value. Remember, you must use the Order of Operations correctly when finding the value of your expression.
5. When time is up, take turns sharing your expressions with the group. Check each other to make sure the expressions are simplified correctly. The player with the SMALLEST correct value wins this round. Find the difference between the winning value and the next smallest value, and give the winner the number of points equal to the difference. Record the winner's name and points on the score card.
    - Example: If the winner's value is 4 and the next closest value is 10, then the winner gets 6 points.
6. After a number of rounds determined by the teacher, add up each player's points to declare a champion!

OOO Dice Score Card

Round #	**Winner** (player with the largest or smallest correct value)	**Points** (difference between winner's value and the next largest or smallest value)
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		