P26.3 ZEE MULTIPLES

This game was inspired by the well-known game of "Yahtzee." After playing this game for a while, the players may come to realize that sums resulting from adding multiples will also be a multiple.

Objective: To find groups of multiples from sets 2 to 9 and to find squares.

Number of players: Two.

Manipulatives: Short Multiplication Table (Appendix page 20), or Skip Counting Patterns (Appendix page 18), optional. Calculator for adding the final scores.

Cards: All the multiplication cards shuffled. Each player needs the grid shown below on the right to write the sum of the multiples and squares found in the Appendix.

Object of the game: To have the highest score at the end of the game found by adding the numbers in each rectangle.

Play: The first player turns over five multiplication cards and searches for a group of multiples in the same set, but no more than 10 times the multiple. For example, the group of 2s cannot have a card greater than 20. A group can have from one to five cards, including identical cards.

In the first example, cards 35, 14, and 28 are a group because they are multiples of 7. These multiples are added together and the sum written in the appropriate rectangle, 77 as shown below.

Alternatively, 9 and 90 could be a group as multiples of 9 and the sum of 99 recorded in the 9-rectangle. This grouping would result in a higher score; however, only one rectangle can be filled in per turn. Once a rectangle is filled in, it cannot be changed. Following a turn, all five cards are discarded and the next player takes a turn.

Consecutive × 2 means any three or more consecutive multiples from any set. The sum is multiplied by 2 and recorded. In the second example, 64, 56, and 72 are consecutive multiples of 8. The sum is 192 and 192 × 2 = 384, which is recorded. (An interesting way to find the sum of three consecutive numbers is to multiply the middle number by 3.)

Squares × 2 refers to numbers that are squares. Since 64 is a square, 64 × 2 = 128, it could have been recorded in the rectangle titled Square × 2. Up to five square numbers may be included during the turn.

35	9	14	90	28

20	64	56	24	72

2	3	4	5	Consecutives × 2 384
6	7 77	8	9	Squares × 2

Players continue taking turns until they have had ten turns and the grid is complete.

Variation: The game is played the same, but the scoring is different. Now the factors of the multiples are added. In the first example, the 35-card gives 5, 14 gives 2, and 28 gives 4 for a total of 11, which would be recorded. The 90 and 9 cards would give 10 + 1 = 11. Another way to find the total is to divide the sum of the numbers by the multiple.

In the second example, the Consecutive multiples 64, 56, and 72 would give (8 + 7 + 9) × 2 = 48. For the squares, the square roots are added and multiplied by 2, so 64 would result in 8 × 2 =16.

2	3	4	5	Consecutives × 2
6	7	8	9	Squares × 2

2	3	4	5	Consecutives × 2
6	7	8	9	Squares × 2

2	3	4	5	Consecutives × 2
6	7	8	9	Squares × 2

2	3	4	5	Consecutives × 2
6	7	8	9	Squares × 2

Short Multiplication Table

1									
2	4								
3	6	9							
4	8	12	16						
5	10	15	20	25					
6	12	18	24	30	36				
7	14	21	28	35	42	49			
8	16	24	32	40	48	56	64		
9	18	27	36	45	54	63	72	81	
10	20	30	40	50	60	70	80	90	100

Cut out the two squares at the left. Fold back on the heavy line to make the table stand up.

1									
2	4								
3	6	9							
4	8	12	16						
5	10	15	20	25					
6	12	18	24	30	36				
7	14	21	28	35	42	49			
8	16	24	32	40	48	56	64		
9	18	27	36	45	54	63	72	81	
10	20	30	40	50	60	70	80	90	100