

Ozobot Trash Can Math Game
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Introduction

The “Trash Can” math game exists in a variety of forms, sometimes using dice and at other times making use of numbered playing cards. This game is perfect for CCSS numbers and operations in base ten standards for grade 2. In the *Ozobot Trash Can Math Game*, Evo simulates rolling a ten-sided die with the digits 0 through 9 inscribed on the die faces.

Here is how to play the trash can game. Evo simulates rolling the ten-sided die for the student. The student must place the digit rolled in one of four locations in the grid shown in Figure 1, *with the goal of obtaining the greatest number possible after four rolls*. Once placed on the grid, the digit cannot be moved to another location. One of the four rolls of the die must be placed in the trash can.

100s	10s	1s	Trash
			

Figure 1

As an example, supposed that the student has the result shown in Figure 2 after four rolls of the die.

100s	10s	1s	Trash
6	5	2	6 

Figure 2

Suppose that the player’s opponent has obtained the result shown in Figure 3.

100s	10s	1s	Trash
3	6	5	2 

Figure 3

With 652 being the greater of 652 and 365, the player with 652 will get a point for that round of the game. The player with the most points after ten rounds is the winner of the game.

Students clearly need to understand place value when playing the trash can game. The game also gives students practice in recognizing the difference between $<$, $=$, and $>$ when comparing player/opponent rolls. Most students will quickly develop a strategy of trashing a low roll of the die or putting it in the 1s place, as well as placing high rolls in the 100s and 10s place. They will also realize that “luck of the draw” is part of the game and something over which they have no control.

Playing the Ozobot Trash Can Math Game

The “Ozobot Trash Can Game” Ozomap, designed for two players, is shown in Figure 4. Full-page copies can be printed from the provided *Trash Game Ozomap.pdf* file. The provided OzoBlockly program, *Ozobot Trash Can Game.ozocode*, is loaded into Evo. After placing Evo on the start location facing the direction of the arrow, Evo is turned on and the program is started.

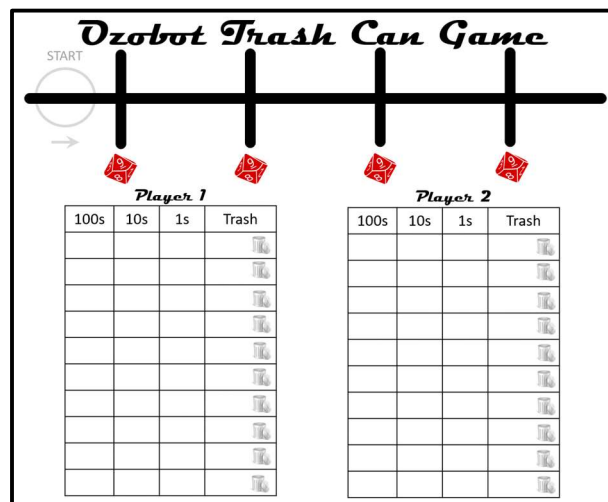


Figure 4

Evo will move to the leftmost die, his top light will blink rapidly, indicating that the die is being rolled, and then Evo will speak the result of the roll. Player 1 will place the value of the roll in one of the four spots—100s, 10s, 1s, or Trash. Player 1 will then press Evo’s button, and Evo will move to the next die. This process continues for all four rolls. After pressing Evo’s button when Evo is on the fourth die, Evo will move to the far-right end of the Ozomap and do an about face. It is then player 2’s turn. During player 2’s turn Evo will move back toward the left, stopping at each die and speaking the value of the die roll. The player’s will compare their two numbers and decide which player gets a point for the round of play. The player with the most points after ten rounds of play wins the game. If necessary, a tie-breaking round can be played.