Nearest to 100 / 1000

Big Idea: Operate/Calculate

Suits: Years 4-6

Materials:

Whiteboard, dice (6 or 10-sided)

Instructions:

Present one of these frames on the board. Students copy the frame onto their paper.

Nearest to 100   Nearest to 1000

Explain that the teacher/leader will roll the die. After each roll, students write that digit into one of the empty squares (with the goal of making two numbers whose sum is nearest to 100 or 1000, without exceeding 100 or 1000).

When all squares are filled, students add the numbers using the left to right place value method. (See below)

The player with the sum nearest to 100 or 1000, without going over the target number, wins the game.

Teacher Notes

This warm up requires students to use known number facts and reason about numbers.
The task, as presented, asks students to use a potentially unfamiliar left to right written method to add.
This may require some discussion and teaching focus. The left to right method connects to students' left to right mental addition strategies.

Be aware that:

- students may initially make choices based upon a 'put it here and hope for the best' strategy. As they have more experience with the warm up task, students will reason about the numbers to make better choices.

Differentiate the task by:

- using a ten-sided die
- adding three 2-digit numbers (nearest to 100) or three 3-digit numbers (nearest to 1000)
- playing the game with decimals (nearest to 1)

Challenge students to:

- calculate the difference between the sum of their numbers and 100, or 1000
- solve problems similar to the following: *How can you arrange these digits to make a sum of exactly 1000?*

Guiding Questions:

- ➢ *What was your strategy for placing digits in the squares?*   .
- ➢ *How might you change your strategy when you play the game next?*