Number Sleuth

Cathery Yeh

Children love scavenger hunts and have rich experiences finding hidden objects in pictures as well as words in word searches. The Number Sleuth activity builds on these experiences and encourages problem solving and computation as students hunt for hidden equations in a number puzzle. The object of the game is simple: uncover all the hidden equations, which may be placed horizontally, vertically or diagonally. For example, a second-grade student circled the digits 6, 0, 4 and 2 and wrote the equation $6 + 0 = 4 + 2$. Equations can be written directly on the puzzle or on a separate sheet. Adapt the activity for different grades by modifying the array size and placing digits in the array on the basis of the operations of focus. For emerging mathematicians, keep the array small and have students circle number pairs or trios that equal five or ten. Construct arrays using digits 0–5 to build fluency to and from five. Encourage middle- and upper-grade learners to include equations with two or more operations. For example, a fourth-grade student created the equation $5 \times 7 =$ $12 \times 3 - 1$ using the digits 5, 7, 1, 2, 3 and 1. Challenge learners to use positive and negative integers, integer exponents and fractions.

Game Variations

- Choose a target number and have students find expressions equalling that value.
- Students can create their own number sleuth activity to share with classmates.

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