Mental Arithmetic in Grades 1-8

<u>Grade 1</u>.

Mental arithmetic is integrated into the math lessons through the use of imaginative number stories.

<u>Grade 2</u>.

- Practice mental arithmetic daily (for 10 minutes or less).
- Mental arithmetic also helps the children to become flexible in using the four processes.
- Work up to calculations like $28 + 5$; $14 \div 2$; 8×5; $86 - 3$; $76 - 74$; $42 - 6$, $72 - 69$.
- *Halfway problems*. These problems should start off easy in second grade and get increasingly more difficult in the coming years. Some examples are:
    - What number is halfway between 25 and 29? 5 and 13? 5 and 23? 25 and 31?
- An empty bus stops and picks up 8 people. At the next stop, 3 people get off and then 4 get on. How many people are now on the bus?
- A mother went to the market with her two children. They bought 24 oranges. They looked so delicious and all three of them ate one orange right away. On their way home, the children met a friend and all three children ate another orange. How many oranges were in the mother's basket when they got home?
- A father was working in the garden during the fall. He found a hole with 5 nuts in a tree, later he found 6 nuts buried in the ground, and then he found 8 nuts on a shelf in the garden shed. How many nuts were there in total?

<u>Grade 3</u>.

- Practice mental arithmetic daily and continue to develop strategies through this work.
- Work up to calculations like $46 + 5$; $28 + 31$; $75 - 68$; $73 - 4$; $24 \div 4$; $100 - 13$; $51 = 46 + \_\_$.
- *Halfway problems*. These problems should start off easy in second grade, and now, in third grade, can get a bit more challenging. Some examples are:
    - What number is halfway between 25 and 41? 25 and 61? 250 and 450?

<u>Grade 4</u>.

- Practice mental arithmetic daily (for 10 minutes or less), and continue to develop strategies.
- Work up to calculations like:
  $400 - 12$; $798 + 5$; 3×400; 28×100; $1000 - 25$; $3000 - 205$; $8000 - 2700$; 40×70; 300×5.
- *"Halfway" problems*. Simple variations of these problems may have been introduced in second grade and third grade, but now we can include more complicated variations, like:
    - What number is halfway between 250 and 350? 250 and 280? 600 and 1100? 25 and 30?
- In fourth grade, it can be helpful (and fun!) to ask the students to find as many strategies as possible. For example, how many ways can you solve this problem: "What's halfway between 14 and 32?"

<u>Grade 5</u>.

- Practice mental arithmetic daily (for 10 minutes or less).
- Work up to calculations like: $84 - 26$; $423 - 60$; $546 + 76$; 40×600; 5.378×100; $24,000 \div 600$. $300,000 - 2$; $300,000 - 200$; $300,000 - 2000$.
- *"Halfway" problems*. We can continue doing problems that were done in earlier grades (e.g., "What is halfway between 26 and 56?"), but now we can add problems that work with fractions, like: What number is halfway between $^3/_8$ and $^7/_8$? $^3/_7$ and $^4/_7$? 25.5 and 26.3?

<u>Grades 6-8</u>.

- It's still important!! Practice mental arithmetic daily (for 10 minutes or less).
- Include *Math "Tricks" and Shortcuts*. See separate sheet.