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Breaking it Down

Description

"Breaking it down" is a math intervention that is intended to help a child's performance on word problems by enhancing his/her comprehension and problem solving methods. This intervention implements specific steps to help the child break the problem down into easier tasks, helping him/her to understand the questions being asked, realize the purpose of the question, be motivated to answer, and to check his/her own accuracy.

Materials

- Mathematic word problems appropriate for child's level

Preparation

- Accurate time should be set aside to work with the child one-on-one in a quiet environment.
- The teacher should be familiar with math vocabulary and understand words that may be confusing or unknown to the child.
    - Basic concepts: plus, minus, times, etc.
    - "How many seconds are in a year?" (seconds as a time increment could be confused as Jan 2nd, Feb 2nd, etc.)

Implementation Steps

1. Developing Vocabulary
    - Translating written words to be understood as numerical and symbolic
        - Vocabulary tests
        - Flash cards
2. Building Background and Motivation
    - Ask child to describe similar problems they have encountered
    - Reword problem using child's name, familiar locations and objects
    - Draw a picture of the problem
3. Setting the Purpose
    - Direct the child's attention to the specific task
    - "Read to find the question that this problem asks"
4. Guiding Silent Reading/Guided Practice
    - Allow the child to work silently on the problem and provide help as needed
    - Provide Immediate feedback
5. Questioning to Determine Comprehension
    - Have student restate the problem in his/her own words to check comprehension
        - If this is difficult for the child, the teacher can rephrase the question for him/her
6. Rereading the Problem
    - The child should learn to ask him/herself:
        - Did I answer the question that was asked?
        - Is my answer reasonable?
        - Did my drawing portray the problem?

Reference

Greabell, L. C. & Anderson, N. A. (1992). Applying Strategies From the Directed Reading Activity to a Directed Mathematics Activity. *School Science and Mathematics*, 92 (3), 142.