



Academic

Solving Single-Digit Addition Problems with Objects

Objective

Teach the student to solve written addition problems by counting and combining groups of objects.

Supplies

: Objects, such as counting blocks, small objects; paper, pencil

Teaching Steps

Step 1: Teach the student to solve one single-digit addition problem or a set of single-digit addition problems.

Step 2: Teach the student to solve a new single-digit addition problem or a set of single-digit addition problems.

Step 3: Randomly present all problems the student has learned in previous steps.

Next Steps

Teach the student each step in the list of Sample Skills to Teach.

Generalization

- Ask the student to solve an addition problem using crackers during snack time.
- Ask the student to solve an addition problem presented verbally (e.g., “What is $6 + 6$?”).
- Do the problems on the blackboard.

Exercise

1. Sit with the student at a table or in a play area.
2. If this is one of the first times teaching the skill, give a brief lesson on the concept of addition (e.g., “Adding means putting the groups together...”). Demonstrate by showing some examples of adding using objects.
3. Place a group of objects (e.g., blocks, bears,

beads) and a pencil on the table.

4. Present a single-digit addition problem on a worksheet (e.g., $2 + 3 = \underline{\quad}$) with blank areas above or below the numbers to place the objects.
5. Give the instruction, “Solve this problem.”
6. To help the student respond correctly, immediately prompt him to say each component of the problem by providing a verbal model (e.g., say, “Two plus three...”). As he is saying part of the problem, guide him to a) point to the first number in the problem, b) count the items from the group of objects and place them onto the blank line, c) point to the second number in the problem, d) count and place the items from the group of objects on the next line, e) move each object over and count the total number of objects, and f) write the total on the worksheet.
7. When the student responds correctly, provide verbal praise (e.g., “Great solving the problem!”), and offer a reward such as a toy, snack, or token.
8. Gradually remove the areas to place the objects and all other prompts until the student is able to respond independently (i.e., without your help).
9. Provide more/better rewards when the student responds correctly with less guidance, and the best rewards when the student responds correctly without guidance.

Error Correction

- Guide the student’s hand with your hand to count out the correct number of objects and add them together.
- Show the student the correct response (e.g., say, “Do this,” and count out the objects; then, write the numeral).

Other Prompting Procedures

- Break the problem down. Show the student only the first number, and have him get the appropriate amount of items. Then, add a second number.
- Use an abacus rather than objects.



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Troubleshooting

Problem: The student doesn't place the items on the line.

Solution: Provide a container to place the objects in rather than a line on the worksheet.

Problem: The student has the problem memorized and no longer uses the objects.

Solution: It may be time to fade the objects and to transfer the skill to worksheets.

Helpful Hints

- Present numbers in both positions (e.g., $1 + 3$ and $3 + 1$).
- Be sure the student attends to the $+$ sign. This will be important when the student must discriminate between signs ($+$, $-$, \times , $/$).

Sample Skills to Teach

BEGINNER

1. (numbers 1-5) + (1-5)

ADVANCED

2. (numbers 6-9) + (6-9)