

FIGURE 3.6: MATHEMATICS SDI STRATEGIES

| Area of Qualification | SDI Strategies |
|--------------------------------|---|
| Mathematics Calculation | <ul style="list-style-type: none"> • Multisensory teaching strategies (for example, body movements and mathematics chants and rhymes) • Instruction on the use of manipulatives (for example, counting blocks and abaci) within the concrete-representational-abstract (CRA) framework • Direct instruction in basic computation (for example, addition, subtraction, multiplication, and division) • Explicit instruction in solving equations step by step • Preteaching key vocabulary and processes • Modeling computation using guided checklists • Additional independent practice for fluency with feedback • Use of color-coded steps in multistep problems • Scaffolded tasks for gradual mastery (for example, partial completion by the teacher and then full student completion) |
| Mathematics Reasoning | <ul style="list-style-type: none"> • Direct instruction in reasoning strategies (for example, solving word problems and making inferences) • Instruction in problem-solving strategies (for example, identifying keywords, estimation) • Modeling how to approach multistep reasoning tasks • Using flowcharts and graphic organizers to plan problem-solving strategies • Preteaching of key reasoning skills and concepts • Instruction on how to chunk complex problems into smaller parts • Real-world applications of mathematics concepts to build connections • Guided practice with subskills related to problem solving with self-questioning prompts |