

Table 13-3

Solve It! Routine for Word Problem Solving

<i>Cognitive/ Meta-Cognitive Strategy^a</i>	<i>Implementation^a</i>	<i>Support for Suggested Use</i>
<p>Read for understanding.</p> <p>Paraphrase—Say it in your own words.</p> <p>Visualize—Draw a picture or diagram.</p> <p>Hypothesis—Devise a plan.</p> <p>Estimate—Round up or down.</p> <p>Compute—Do the math.</p> <p>Check—Compare to estimate. Redo the computations.</p> <p>(Montague, 2003)</p>	<p>Step 1: Assessment (Montague, 2003) Implement Mathematical Problem Solving Pre-Assessment to determine need for intervention.</p> <p>Step 2: Teach strategy using an explicit teaching model.</p> <p>A. Advanced Organizer Link learning objective to real world.</p> <p>B. Demonstration</p> <ol style="list-style-type: none"> 1. Model the activity using think aloud to demonstrate cognitive and meta-cognitive processes. 2. Engage students with questions and prompts. 3. Adjust demonstration or re-demonstrate to make clarifications based upon student understanding. 4. Demonstrate for at least three teaching sessions or until all students have memorized the steps in the strategy. <p>C. Guided Instruction until students have achieved 80% Mastery</p> <ol style="list-style-type: none"> 1. Gradually fade support as students demonstrate proficiency. 2. Question to monitor performance. 3. Give positive and corrective feedback. 	<ol style="list-style-type: none"> 1. Teach to the student’s visual strengths (Mayes & Calhoun, 2003). Students with HFA/AS have strength in visual processing (Mayes & Calhoun, 2003a,b, 2008). Visualize step presents an abstract concept in a more concrete fashion (Griffin et. al, 2006). 2. Break word problem solving into manageable components (Mayes & Calhoun, 2008). Students with HFA/AS may need organizational support for complex materials (Mayes & Calhoun, 2008). Solve It! provides organization to multiple step word problems. 3. Students with HFA/AS may have difficulty with comprehension (Mayes & Calhoun, 2003a,b). Paraphrasing may support students’ comprehension. 4. Students with HFA/AS have difficulty with complex planning (Happe et. al, 2006). The hypothesis step provides students with structure to developing a plan. 5. Students with HFA/AS have difficulty with self-monitoring and response inhibition (Happe et al., 2006). The Check step provides a process for self-monitoring.