**EVIDENCE-BASED PRACTICE**  
**COGNITIVE STRATEGY INSTRUCTION (CSI)**

<table>
<thead>
<tr>
<th>Subject Area(s)</th>
<th>Mathematics</th>
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<td>Grade Level(s)</td>
<td>K-12</td>
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**Brief Summary**  
Cognitive strategy instruction (CSI) is an explicit instructional approach that teaches students general and specific cognitive strategies to improve learning and performance. This is done through helping students understand how to process information.

**Expanded Description**  
CSI uses metacognitive and self-regulation strategies in structured routines that assist students in monitoring and evaluating their understanding of the problems. Student’s ability to find and use effective strategies is a necessary skill for mathematic success. CSI helps students to become strategic and self-regulated learners. Using proven procedures associated with explicit instruction including process modeling, verbal rehearsal, scaffolding instruction, guided and distributed practice, and self-monitoring, students learn to apply and internalize this cognitive routine. It allows them to develop the ability to use it automatically and flexibly. CSI is based on behavioral and cognitive theories.

**Essential Components/ “How to” Information**  
The student learns a specific series of steps to analyze and answer math problems. The steps include reading the problem, paraphrasing the problem, creating a visual representation of the problem, creating a plan to solve the problem, predicting or estimating the answer, computing the answer, and checking the answer.

**Implications for Practice**  
This strategy can be used across many grade levels in the subject of mathematics.

CSI uses mnemonic devices to help solve math problems.

**Possible Adaptations/Modifications**  
Steps of process are visually represented on a cue card.  
Can be used in combination with self-monitoring strategies.
Foundational References


Additional Links/Sources


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