

# Cognitively Guided Instruction

## Cognitively Guided Instruction is...

a research-based way of teaching mathematics that embraces/encompasses the following components:

- problem solving in meaningful contexts with flexible solution strategies
- building mathematical understanding through questioning based on student prior knowledge
- integration of mathematical concepts

<b>IS</b>	<b>IS NOT</b>
<ul style="list-style-type: none"> <li>• Research-based philosophy of teaching mathematics</li> <li>• A way of teaching mathematics that enables students to solve problems anyway they choose</li> <li>• How teachers learn to understand students' mathematical thinking</li> <li>• Honoring where students are</li> <li>• The way adults solve problems</li> <li>• Based on problem solving</li> <li>• A journey or process</li> <li>• Looking at how students solve problems on their own and how to move them to a higher level</li> <li>• Focused on "individual" understanding of each student</li> <li>• Questioning to get to understanding of each student's mathematical thinking</li> <li>• Fostering and facilitating student understanding</li> <li>• Facilitating student communication</li> <li>• Flexible strategies</li> <li>• Construction</li> <li>• Children building meaning based on what they already know</li> <li>• Integration of concepts</li> </ul>	<ul style="list-style-type: none"> <li>• A scope and sequence</li> <li>• A recipe</li> <li>• A set of worksheets or computational problems (naked numbers problems)</li> <li>• A simplistic approach</li> <li>• A set of instructional materials</li> <li>• A prescribed set of strategies and techniques</li> <li>• Formal algorithms</li> <li>• Skills in isolation</li> </ul>