

LOCATE and SOLVE MATH LEARNING PROBLEMS

Column 1: How to Teach Clearly

Column 2: How to Assess Learning

Column 1: *How to Respond to Learning Problems (yes, it's good teaching)*

Column 3: **How to Exceed**—give students greater challenges

KNOW WHAT: Math Facts

Teach Clearly	Assess Diversely	Challenge students to Exceed
<input type="checkbox"/> Post math words and symbols with pictures/examples <input type="checkbox"/> “Practice Pack”—students make their own facts on small pieces of paper, match them with words and examples—take it home to practice. <input type="checkbox"/> “Math Fact of the Day” <input type="checkbox"/> Fact “Bingo” <input type="checkbox"/> Act out the facts <input type="checkbox"/> Think then Pair and Compare	Complete a fact chart. Answer question with correct fact. Match fact with question (as in Jeopardy) Make a glossary chart.	Students write math fact booklets. Students use math facts to create an exhibit. Students write math fact songs and poems.

KNOW HOW: Math Processes

Teach Clearly	Assess Diversely	Challenge students to Exceed
<input type="checkbox"/> Teacher “Thinks out loud” <input type="checkbox"/> Model different ways to solve same problem <input type="checkbox"/> Peer coach <input type="checkbox"/> Student models problem solving <input type="checkbox"/> Learning “partner” <input type="checkbox"/> Work in groups <input type="checkbox"/> Post example <input type="checkbox"/> Post a path—steps to follow <input type="checkbox"/> “Math Smart Pack”—practice with cards that hold numbers and symbols. <input type="checkbox"/> Draw the problem <input type="checkbox"/> Start with simpler problem, build in more challenges. <input type="checkbox"/> Think then Pair and Compare	Solve problem correctly, circle answer. Answer multiple choice question, explain why you chose answer. Write steps to solve the problem. Daily Math Journal	Students make math guides. Students present math “models” Students make their own math problems and give to each other to solve.