## Contents

List of Videos	ix
Acknowledgments	xi
About the Authors	xiii
Introduction	1
What Works Best	3
What Works Best When	8
The Path to Assessment-Capable Visible Learners in Mathematics	12
How This Book Works	15
Chapter 1. Teaching With Clarity in Mathematics	21
Components of Effective Mathematics Learning	27
Surface, Deep, and Transfer Learning	28
Moving Learners Through the Phases of Learning Surface Learning in the Kindergarten Through	32
Second Grade Mathematics Classroom  Deep Learning in the Kindergarten Through  Second Grade Mathematics Classroom	34
Transfer Learning in the Kindergarten Through Second Grade Mathematics Classroom	37
Differentiating Tasks for Complexity and Difficulty	38
Approaches to Mathematics Instruction	40

Checks for Understanding	42
Profiles of Three Teachers	43
Adam Southall	43
Calder McLellan	44
Carol Busching	45
Reflection	46
Chapter 2. Teaching for the Application of	
Concepts and Thinking Skills	49
Mr. Southall and Number Combinations	50
What Mr. Southall Wants His Students to Learn	53
Learning Intentions and Success Criteria	54
Activating Prior Knowledge	56
Scaffolding, Extending, and Assessing Student	
Thinking	59
Teaching for Clarity at the Close	60
Ms. McLellan and Unknown Measurement Values	67
What Ms. McLellan Wants Her Students to Learn	69
Learning Intentions and Success Criteria	70
Activating Prior Knowledge	71
Scaffolding, Extending, and Assessing Student	
Thinking	74
Teaching for Clarity at the Close	76
Ms. Busching and the Ever-Expanding Number System	85
What Ms. Busching Wants Her Students to Learn	87
Learning Intentions and Success Criteria	88
Activating Prior Knowledge	89
Scaffolding, Extending, and Assessing Student	
Thinking	96
Teaching for Clarity at the Close	97
Reflection	105
Chapter 3. Teaching for Conceptual	
Understanding	107
186 - Anna Caralle St. (1875) page and selection of the standard contraction and the	
Mr. Southall and Patterns	108
What Mr. Southall Wants His Students to Learn	110

Activating Prior Knowledge  Scaffolding Extending and Assessing Student	112
Scaffolding, Extending, and Assessing Student Thinking	116
Teaching for Clarity at the Close	116
Ms. McLellan and the Meaning of the Equal Sign What Ms. McLellan Wants Her Students to Learn Learning Intentions and Success Criteria Activating Prior Knowledge Scaffolding, Extending, and Assessing Student Thinking Teaching for Clarity at the Close	122 123 124 125 130 131
Ms. Busching and the Meaning of Addition What Ms. Busching Wants Her Students to Learn Learning Intentions and Success Criteria Activating Prior Knowledge Scaffolding, Extending, and Assessing Student Thinking Teaching for Clarity at the Close	139 140 141 142 147 152
Reflection	160
Chapter 4. Teaching for Procedural Knowledge and Fluency	161
Mr. Southall and Multiple Representations What Mr. Southall Wants His Students to Learn Learning Intentions and Success Criteria Activating Prior Knowledge Scaffolding, Extending, and Assessing Student Thinking Teaching for Clarity at the Close	162 163 165 166 169 170
Ms. McLellan and Equality Conjectures What Ms. McLellan Wants Her Students to Learn Learning Intentions and Success Criteria Activating Prior Knowledge Scaffolding, Extending, and Assessing Student	179 181 182 183
Thinking Teaching for Clarity at the Close	186 188

Ms. Busching and Modeling Subtraction	194
What Ms. Busching Wants Her Students to Learn	196
Learning Intentions and Success Criteria	197
Activating Prior Knowledge	198
Scaffolding, Extending, and Assessing Student Thinking	202
Teaching for Clarity at the Close	204
Reflection	211
Chapter 5. Knowing Your Impact:	
Evaluating for Mastery	213
What Is Mastery Learning?	214
Using Learning Intentions to Define Mastery Learning	215
Establishing the Expected Level of Mastery	217
Collecting Evidence of Progress Toward Mastery	219
Ensuring Tasks Evaluate Mastery	229
Ensuring Tests Evaluate Mastery	230
Feedback for Mastery	233
Task Feedback	234
Process Feedback	234
Self-Regulation Feedback	239
Conclusion	240
Final Reflection	243
CAT IV S. B. CO. To g. to was the formulogick behalf. All controlled to make the	
Appendices	245
A. Effect Sizes	245
B. Teaching for Clarity Planning Guide	250
C. Learning Intentions and Success Criteria Template	255
D. A Selection of International Mathematical Practice	
or Process Standards	256
References	259
Index	263