

# THE SOLO MODEL APPLIED TO MATHEMATICS

Learning Intentions		Success Criteria
<b>SOLO 1: Represent and solve problems involving addition and subtraction.</b>		
<b>Uni-/Multi-Structural</b>	<p>Know basic facts for addition and subtraction.</p> <p>Represent addition and subtraction using multiple models (manipulatives, number lines, bar diagrams, etc.).</p>	<p>I know my sums to twenty in both addition and subtraction.</p> <p>I can show my thinking using manipulatives and pictures.</p>
<b>Relational</b>	<p>Understand the meaning of addition or subtraction by modeling what is happening in a contextual situation (Carpenter, Fennema, Franke, Levi, &amp; Empson, 2014).</p> <p>Recognize when either addition or subtraction is used to solve problems in different situations.</p>	<p>When I read a word problem, I can describe what is happening and use addition or subtraction to find a solution.</p>
<b>Extended Abstract</b>	<p>Use addition and subtraction to solve problems in a variety of situations.</p>	<p>I can use what I know about addition and subtraction contexts to figure out how to use addition and subtraction to solve problems beyond those I solve in class.</p>
<b>SOLO 2: Reason with shapes and their attributes.</b>		
<b>Uni-/Multi-Structural</b>	<p>Know the definitions and key attributes for shapes.</p>	<p>I can identify and name the attributes of shapes.</p>
<b>Relational</b>	<p>Recognize relationships among shapes.</p>	<p>I can explain how two shapes are related to each other.</p>
<b>Extended Abstract</b>	<p>Classify two-dimensional shapes based on properties.</p>	<p>I can create a diagram to show how different quadrilaterals are related to each other.</p>

Source: Adapted from Biggs and Collis (1982).



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Figure 1.3