

Example of a Cognitive Demand Sort

A. Julia and Angela are getting paid this Friday. Julia's check has 3 digits and they are all 9's. Angela's check has 4 digits, without any 9's. Who is getting paid more money? Why do you think so?

B. Mark used 5 base ten blocks to represent a number. Chipper used 3 base ten blocks to represent a number. How might their two numbers compare?

C. Jim had 3 rods, 2 flats and 7 units. Jasmine had 2 rods, 6 flats and 9 units. What number can each person represent if they use their own blocks? Compare these numbers.


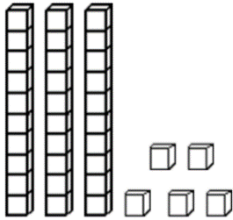

D. Compare:

7,891 is _____ than 8,791

E. $13,193 > 13, \underline{\quad} 93$

Fill in a digit would make this true.

What's Right with What's Wrong?

<i>Question and Response</i>	<i>What do they know?</i>	<i>Areas for Growth</i>
<p>Which set has more triangles?</p> <p>Set A Set B</p>  <p>Response: Set A</p>		
<p>What number does this model represent?</p>  <p>Key: 1 = </p> <p>(Response: 303)</p>		

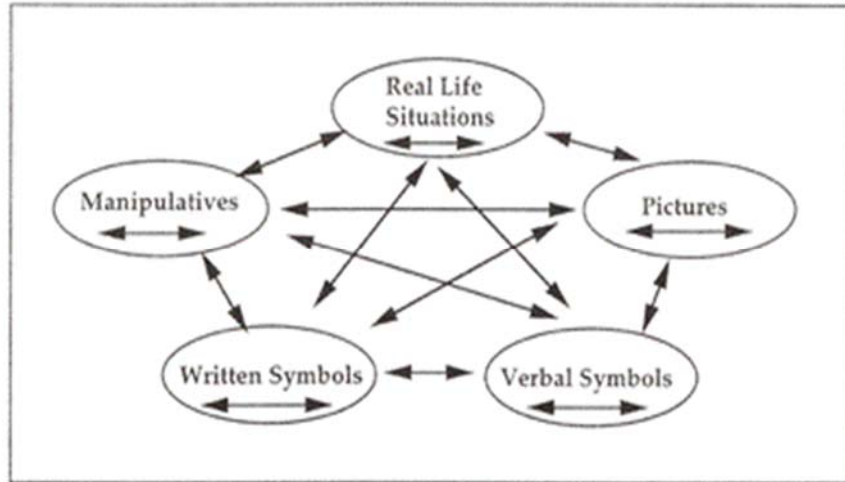
<p>Round 135 to the nearest 10.</p> <p>Response: 40</p>		
<p>Read the following decimal number:</p> <p>54,403.087</p> <p>Response: Fifty-four thousand, four hundred and three and eighty- seven hundredths</p>		

The next activity or discussion would be about how to address the areas of growth.

This can be a “collaborative” activity using real and current student work.

**Use and Connect
Mathematical
Representations**

(Principles, p. 25)



Using the Lesh model, what should be a part of instruction for:

SOL 2.1 Round two digit numbers to the nearest 10.

Real Life	Pictures	Manipulatives	Written	Verbal

SOL 5.1 Round decimals through thousandths.

Real Life	Pictures	Manipulatives	Written	Verbal

Progression of I can's

SOL:	SOL:	SOL:

Sample Peer Teacher Questioning Observation Form

Teacher _____ Peer _____

Teacher Question	Wait Time	Student Response	Question Type
			<input type="checkbox"/> Gathering <input type="checkbox"/> Probing <input type="checkbox"/> Visible Math <input type="checkbox"/> Reflect/Justify
			<input type="checkbox"/> Gathering <input type="checkbox"/> Probing <input type="checkbox"/> Visible Math <input type="checkbox"/> Reflect/Justify
			<input type="checkbox"/> Gathering <input type="checkbox"/> Probing <input type="checkbox"/> Visible Math <input type="checkbox"/> Reflect/Justify
			<input type="checkbox"/> Gathering <input type="checkbox"/> Probing <input type="checkbox"/> Visible Math <input type="checkbox"/> Reflect/Justify

See Principles to Actions pages 36-37 for Question Type descriptions

Mathematics Teaching Practice	Ideas
<i>Establish Mathematics Goals to Focus Learning</i>	
<i>Implement tasks that promote reasoning and problem solving</i>	
<i>Use and Connect Mathematical Representations</i>	
<i>Facilitate meaningful mathematics Discourse</i>	
<i>Pose Purposeful Questions</i>	
<i>Build procedural fluency from conceptual understanding</i>	
<i>Support productive struggle in learning mathematics</i>	
<i>Elicit and use evidence of student thinking</i>	