

# Number Sense Rubric

## SNAP (Student Numeracy Assessment & Practice)

Competency	<b>Emerging</b> <i>The student demonstrates an initial understanding of the concepts and competencies relevant to the expected learning.</i>	<b>Developing</b> <i>The student demonstrates a partial understanding of the concepts and competencies relevant to the expected learning.</i>	<b>Proficient</b> <i>The student demonstrates a complete understanding of the concepts and competencies relevant to the expected learning.</i>	<b>Extending</b> <i>Student demonstrates an insightful understanding of the concepts and competencies relevant to the expected learning</i>
<b>Communicating and Representing</b> <i>Picture Box</i> <hr style="border-top: 1px dashed black;"/> <i>Describe Picture</i> <hr style="border-top: 1px dashed black;"/> <i>Expanded Form</i>	<ul style="list-style-type: none"> <li>Pictures do not show the value of the number</li> <li>Inaccurate</li> </ul>	<ul style="list-style-type: none"> <li>Pictures show some value in representing the number</li> <li>Partially accurate</li> </ul>	<ul style="list-style-type: none"> <li>Pictures are clearly communicated and represent the value of the number (e.g. base ten and/or symbols)</li> <li>Accurate</li> </ul>	<ul style="list-style-type: none"> <li>Pictures demonstrate deep understanding in multiple ways or show an understanding of number concepts beyond grade-level expectations</li> <li>Description is organized and clearly communicated</li> <li>If the expanded form is clear and accurate, base you score of "Proficient" or "Extending" on the picture and description</li> </ul>
	<ul style="list-style-type: none"> <li>Description and elaboration of pictorial representation is not evident</li> <li>Communication is not clear</li> </ul>	<ul style="list-style-type: none"> <li>Partial accuracy in describing and elaborating on pictorial representation <b>AND/OR</b></li> <li>Partially communicated</li> </ul>	<ul style="list-style-type: none"> <li>Accurately describes and elaborates on pictorial representation (e.g. legend, key, or words)</li> <li>Clearly communicated</li> </ul>	
	<ul style="list-style-type: none"> <li>Emergent understanding of the value of digits in their place values</li> </ul>	<ul style="list-style-type: none"> <li>Partially accurate in demonstrating the value of each digit (40000 +2000+139=42139 OR 40000+100 +30+9=42139)</li> </ul>	<ul style="list-style-type: none"> <li>Accurately demonstrates the value of each digit (e.g. 500+20+4 or five hundreds, 2 tens, and 4 ones)</li> </ul>	
<b>Understanding and Solving</b> <i>3 Equations</i>	<ul style="list-style-type: none"> <li>Emergent use of operations</li> </ul>	<ul style="list-style-type: none"> <li>Accurately uses grade appropriate operations in one or two equations</li> </ul>	<ul style="list-style-type: none"> <li>Accurately uses grade appropriate operations in all three equations (see Exemplars for examples)</li> </ul>	<ul style="list-style-type: none"> <li>Takes risks with challenging operations and shows proficiency beyond usual grade-level expectations</li> </ul>
<b>Connecting and Reflecting</b> <i>Real Life Connection</i> <hr style="border-top: 1px dashed black;"/> <i>Reflection</i>	<ul style="list-style-type: none"> <li>A real-life example is not provided or is not connection to the number</li> </ul>	<ul style="list-style-type: none"> <li>A partial connection to a real-life example is provided (e.g. "I bought a house for \$319")</li> </ul>	<ul style="list-style-type: none"> <li>Connection to a real-life example is provided</li> <li>Demonstrates understanding of the number value (e.g. 5347 leaves on a small tree shows understanding; "I live at 5347 Elm St," does not)</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrates a deep understanding of the number value and provides one or more specific, accurate examples</li> <li>Demonstrates insightful understanding of problem-solving strategies, personal strengths, and/or goal areas</li> </ul>
	<ul style="list-style-type: none"> <li>With support, student is not yet able to reflect on their learning</li> </ul>	<ul style="list-style-type: none"> <li>Can partially identify strengths and stretches</li> <li>e.g. "Everything was easy. Nothing was hard."</li> </ul>	<ul style="list-style-type: none"> <li>With sentence frames and structure, can proficiently reflect on their learning e.g. "I feel confident with ___; ___ was challenging; my goal is ___"</li> </ul>	
<b>Reasoning and Analyzing</b> <i>Number Line</i> <hr style="border-top: 1px dashed black;"/> <i>Counting Forwards and Backwards</i>	<ul style="list-style-type: none"> <li>Emergent understanding of the placement of the number on a number line</li> </ul>	<ul style="list-style-type: none"> <li>Partially correct estimate of placement of number on provided number line; benchmarks may be missing</li> </ul>	<ul style="list-style-type: none"> <li>Correct estimate of placement of number on provided number line with at least three benchmarks</li> </ul>	<ul style="list-style-type: none"> <li>Precise placement of number on the number line with multiple, accurate benchmarks</li> <li>Complete, accurate, and organized with no errors</li> </ul>
<ul style="list-style-type: none"> <li>Emergent understanding of place value, number sense, and/or skip counting</li> </ul>	<ul style="list-style-type: none"> <li>Partially complete and accurate</li> </ul>	<ul style="list-style-type: none"> <li>Complete and accurate; demonstrates understanding but may include a minor recording error</li> </ul>		



# Operations Rubric

## SNAP (Student Numeracy Assessment & Practice)

<b>Competency</b>	<b>Emerging</b> <i>Student demonstrates an initial understanding of the concepts and competencies relevant to the expected learning</i>	<b>Developing</b> <i>Student demonstrates a partial understanding of the concepts and competencies relevant to the expected learning</i>	<b>Proficient</b> <i>Student demonstrates a complete understanding of the concepts and competencies relevant to the expected learning</i>	<b>Extending</b> <i>Student demonstrates an insightful understanding of the concepts and competencies relevant to the expected learning</i>
<b>Communicating and Representing</b> <i>Entire Assessment</i>	<ul style="list-style-type: none"> <li>Communication (written, pictorial or symbolic) of understanding is emerging</li> </ul>	<ul style="list-style-type: none"> <li>Communicates (written, pictorial or symbolic) partial understanding</li> </ul>	<ul style="list-style-type: none"> <li>Communicates (written, pictorial or symbolic) clear understanding</li> </ul>	<ul style="list-style-type: none"> <li>Communicates (written, pictorial or symbolic) insightful understanding in multiple ways</li> </ul>
<b>Understanding and Solving</b> <i>Draw &amp; Calculate Boxes</i>	<ul style="list-style-type: none"> <li>Emergent use of strategies to solve the problem and show understanding</li> </ul>	<ul style="list-style-type: none"> <li>Strategies chosen do not lead to an accurate solution</li> <li>Reasoning to solve the problem is absent</li> </ul>	<ul style="list-style-type: none"> <li>Uses <b>grade appropriate</b> strategies to correctly solve the problem and show understanding</li> </ul>	<ul style="list-style-type: none"> <li>Uses multiple strategies and/or insightful reasoning to correctly solve the problem and show understanding</li> </ul>
<b>Connecting and Reflecting</b> <i>Real Life Example/ Word Problem</i>	<ul style="list-style-type: none"> <li>Emerging ability to connect mathematical concepts to real life examples</li> </ul>	<ul style="list-style-type: none"> <li>Real life example and connections to mathematical concepts are partially developed</li> </ul>	<ul style="list-style-type: none"> <li>Real life example and connections to mathematical concepts are evident</li> <li>The example shows a clear connection to the operation</li> </ul>	<ul style="list-style-type: none"> <li>Real life example and connections to mathematical concepts are insightful</li> </ul>
<i>Reflection</i>	<ul style="list-style-type: none"> <li>With support, student is not yet able to reflect on their learning</li> </ul>	<ul style="list-style-type: none"> <li>Can partially identify strengths and stretches <i>"Everything was easy; nothing was hard"</i></li> </ul>	<ul style="list-style-type: none"> <li>With sentence frames and structure, can proficiently reflect on their learning <i>"I feel confident with ___; ___ was challenging; my goal is ___"</i></li> </ul>	<ul style="list-style-type: none"> <li>Insightful reflection on mathematical thinking is evident</li> </ul>
<b>Reasoning and Analyzing</b> <i>Estimate &amp; Justify Box</i>	<ul style="list-style-type: none"> <li>Emerging ability to use Estimation/mental math strategies</li> <li>Estimate is not yet reasonable and justification not provided</li> </ul>	<ul style="list-style-type: none"> <li>Calculates rather than estimates <i>"I think it is 366 because <math>3 \times 122 = 366</math>"</i></li> <li>Strategy use is not justified <i>"My guess is 300 because I used mental math"</i></li> </ul>	<ul style="list-style-type: none"> <li>Reasonable estimation provided</li> <li>Clearly explains strategy <i>"I think it is about 360 because I did <math>3 \times 100 = 300</math> and <math>3 \times 20 = 60</math> and added <math>300 + 60</math>"</i></li> </ul>	<ul style="list-style-type: none"> <li>Reasonable estimation provided and insightfully explains the strategy <i>"I think it is about 360 because I did <math>3 \times 100 = 300</math> and <math>3 \times 20 = 60</math> and added <math>300 + 60</math> but the solution is greater than that because I</i></li> </ul>