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| **Process Skill** | **Notes** |
| **1- Mathematical Problem Solving** |
| ☐ I understand the meaning of the problem and look for entry points to its solution☐ I analyze information (givens, constrains, relationships, goals)☐ I make conjectures and plan a solution pathway☐ I monitor and evaluate my progress and change course as necessary☐ I check my answers to problems and ask, “Does this make sense?” |  |
| **2- Mathematical Communication** |
| ☐ I use definitions and previously established causes/effects (results) in constructing arguments☐ I make conjectures and use counterexamples to build a logical progression of statements to explore and support their ideas☐ I communicate and defend my mathematical reasoning using objects, drawings, diagrams, actions☐ I listen to or read the arguments of others☐ I decide if the arguments of others make sense to me and ask probing questions to clarify or improve the arguments |  |
| **3- Mathematical Reasoning** |
| ☐ I make sense of quantities and relationships in problem situations☐ I represent abstract situations symbolically and understand the meaning of quantities☐ I create a coherent representation of the problem at hand☐ I consider the units involved☐ I can flexibly use properties of operations |  |
| **4- Mathematical Connections** |
| ☐ I look for patterns or structure, recognizing that quantities can be represented in different ways☐ I recognize the significance in concepts and models and use the patterns or structure for solving related problems☐ I view complicated quantities both as single objects or compositions of several objects and use operations to make sense of problems☐ I notice repeated calculations and look for general methods and shortcuts☐ I continually evaluate the reasonableness of intermediate results (comparing estimates) while attending to details and make generalizations based on findings |  |

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| **5- Mathematical Representation** |
| ☐ I apply my prior knowledge to solve real world problems☐ I identify important quantities and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas☐ I make assumptions and approximations to make a problem simpler☐ I check to see if an answer makes sense within the context of a situation and change a model when necessary |  |
| **6- Use appropriate tools strategically** |
| ☐ I make sound decisions about the use of specific tools. Examples might include:☐ Calculator☐ Concrete models☐ Digital Technology☐ Pencil/paper☐ Ruler, compass, protractor☐ I use technological tools to visualize the results of assumptions, explore consequences and compare predications with data☐ I identify relevant external math resources (digital content on a website) and I use them to pose or solve problems☐ I use technological tools to explore and deepen understanding of concepts |  |
| **7- Mathematical Precision** |
| ☐ I communicate precisely using clear definitions☐ I state the meaning of symbols, carefully specifying units of measure, and providing accurate labels☐ I calculate accurately and efficiently, expressing numerical answers with a degree of precision☐ I provide carefully formulated explanations☐ I label accurately when measuring and graphing |  |

 *Adapted from the Mathematics Process Standards, SOL, Virginia Department of Education, by Dan Mulligan, 2012 – 2013.*

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| **Additional comments based on observed learning:** |