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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:** |