**My Standards for Mathematical Practice**

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| **Student Observable Behaviors** | | |
| **1. Make sense of problems and persevere in solving them (problem solving)** |  | |
| 1. Working and reading rich problems carefully |  |  |
| 1. Drawing pictures, diagrams, tables, or using objects to make sense of the problem |  |  |
| 1. Discussing the meaning of the problem with team members |  |  |
| 1. Making choices about which solution path to take |  |  |
| 1. Trying out potential solution paths and making changes as needed |  |  |
| 1. Checking answers and making sure solutions are reasonable and make sense |  |  |
| 1. Explaining other ways to solve the problem |  |  |
| 1. Persisting in efforts to solve the to solve challenging problems, even after reaching a point of frustration |  |  |
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| **2. Reason abstractly and quantitatively (reasoning)** |  | |
| 1. Using mathematical symbols to represent situations |  |  |
| 1. Taking quantities out of context in situations (deconstructing) |  |  |
| 1. Putting quantities back in context to see if they make sense (contextualizing) |  |  |
| 1. Considering units when determining if the answer makes sense in terms of the situation |  |  |
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| **3. Construct viable arguments and critique the reasoning of others (proof)** |  | |
| 1. Making and testing conjectures |  |  |
| 1. Explaining and justifying their thinking using words, objects, and drawings |  |  |
| 1. Listening to the ideas of others and deciding if they make sense |  |  |
| 1. Asking useful questions |  |  |
| 1. Identifying flaws in logic when responding to the arguments of others |  |  |
| 1. Elaborating with a second sentence (spontaneously or prompted by the teacher or another student) to explain their thinking and connect it to their first sentence |  |  |
| 1. Talking about and asking questions about each other’s thinking, in order to clarify or improve their own mathematical understanding |  |  |
| 1. Revising their work based on the justification and explanations of others |  |  |
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| **4. Model with mathematics (representations)** |  | |
| 1. Using mathematical models (i.e., formulas, equations, symbols) to solve problems in the world |  |  |
| 1. Using appropriate tools such as objects, drawings, and tables to create mathematical models |  |  |
| 1. Making connections between different mathematical representations (concrete, verbal, algebraic, numerical, graphical, pictorial, etc.) |  |  |
| 1. Checking to see if an answer makes sense within the context of a situation and changing the model as needed |  |  |

**Standards for Mathematical Practice**

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| **Student Observable Behaviors** | | |
| **5. Use appropriate tools strategically (justifying)** |  | |
| * 1. Using technological tools to explore and deepen understanding of concepts |  |  |
| * 1. Deciding which tool will best help solve the problem. Examples may include |  |  |
| 1. Calculator |  |  |
| 1. Concrete model |  |  |
| 1. Digital Technology |  |  |
| 1. Pencil/paper |  |  |
| 1. Ruler, compass, protractor |  |  |
| * 1. Estimating solutions before using a tool |  |  |
| * 1. Comparing estimates to solutions to see if the tool was effective |  |  |
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| **6. Attend to precision (accuracy)** |  | |
| * 1. Communicating precisely using clear language and accurate mathematical vocabulary |  |  |
| * 1. Deciding when to estimate or give a precise answer |  |  |
| * 1. Calculating accurately and efficiently, expressing answers with an appropriate degree of precision |  |  |
| * 1. Using appropriate units; appropriately labeling diagrams and graphs |  |  |
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| **7. Look for and make use of structure (thinking)** |  | |
| 1. Finding structure and patterns in numbers |  |  |
| 1. Finding structure and patterns in diagrams and graphs |  |  |
| 1. Using patterns to make rules about math |  |  |
| 1. Using these math rules to help them solve problems |  |  |
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| **8. Look for and express regularity in repeated reasoning. (connections)** |  | |
| 1. Looking for patterns when working with numbers, diagrams, tables, and graphs |  |  |
| 1. Observing when patterns are repeated |  |  |
| 1. Using observations from repeated calculations to take shortcuts |  |  |

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| **Summary:** |