Standards for Mathematical Practices - "Student Look-fors"

School:	**Teacher(s):**	**Course/Period:**	**Start/End Times:**
Mathematical Topic(s):			

1. Make sense of problems and perseveres in solving them

- ☐ Understand the meaning of the problem and look for entry points to its solution
- ☐ Analyze information (givens, constrains, relationships, goals)
- ☐ Make conjectures and plan a solution pathway
- ☐ Monitor and evaluate the progress and change course as necessary
- ☐ Check answers to problems and ask, "Does this make sense?"

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Comments:

2. Reason abstractly and quantitatively

- ☐ Make sense of quantities and relationships in problem situations
- ☐ Represent abstract situations symbolically and understand the meaning of quantities
- ☐ Create a coherent representation of the problem at hand
- ☐ Consider the units involved
- ☐ Flexibly use properties of operations

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Comments:

3. Construct viable arguments and critique the reasoning of others

- ☐ Use definitions and previously established causes/effects (results) in constructing arguments
- ☐ Make conjectures and use counterexamples to build a logical progression of statements to explore and support their ideas
- ☐ Communicate and defend mathematical reasoning using objects, drawings, diagrams, actions
- ☐ Listen to or read the arguments of others
- ☐ Decide if the arguments of others make sense and ask probing questions to clarify or improve the arguments

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Comments:

4. Model with mathematics.

- ☐ Apply prior knowledge to solve real world problems
- ☐ Identify important quantities and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas
- ☐ Make assumptions and approximations to make a problem simpler
- ☐ Check to see if an answer makes sense within the context of a situation and change a model when necessary

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Comments:

5. Use appropriate tools strategically.

- ☐ Make sound decisions about the use of specific tools. Examples might include:
  - ☐ Calculator
  - ☐ Concrete models
  - ☐ Digital Technology
  - ☐ Pencil/paper
  - ☐ Ruler, compass, protractor
- ☐ Use technological tools to visualize the results of assumptions, explore consequences and compare predications with data
- ☐ Identify relevant external math resources (digital content on a website) and use them to pose or solve problems
- ☐ Use technological tools to explore and deepen understanding of concepts

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Comments:

6. Attend to precision.

- ☐ Communicate precisely using clear definitions
- ☐ State the meaning of symbols, carefully specifying units of measure, and providing accurate labels
- ☐ Calculate accurately and efficiently, expressing numerical answers with a degree of precision
- ☐ Provide carefully formulated explanations
- ☐ Label accurately when measuring and graphing

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Comments:

7. Look for and make use of structure.

- ☐ Look for patterns or structure, recognizing that quantities can be represented in different ways
- ☐ Recognize the significance in concepts and models and use the patterns or structure for solving related problems
- ☐ View complicated quantities both as single objects or compositions of several objects and use operations to make sense of problems

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Comments:

8. Look for and express regularity in repeated reasoning

- ☐ Notice repeated calculations and look for general methods and shortcuts
- ☐ Continually evaluate the reasonableness of intermediate results (comparing estimates) while attending to details and make generalizations based on findings

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Comments:

Additional notes:

Non-evaluative visitor(s): _____ **Date:** _____