**Achievement Level Descriptors**

**Exceeding Expectations**
A student who performed at this level exceeded grade-level expectations by demonstrating mastery of the subject matter.

**Meeting Expectations**
A student who performed at this level met grade-level expectations and is academically on-track to succeed in the current grade in this subject.

**Partially Meeting Expectations**A student who performed at this level partially met grade-level expectations in this subject. The school, in consultation with the student’s parent/guardian, should consider whether the student needs additional academic assistance to succeed in this subject.

**Not Meeting Expectations**A student who performed at this level did not meet grade-level expectations in this subject. The school, in consultation with the student’s parent/guardian, should determine the coordinated academic assistance and/or additional instruction the student needs to succeed in this subject.

**MCAS Achievement Level Descriptors**

**Mathematics: Grades 3 through 8 and 10.**

Student results on the MCAS tests are reported according to four achievement levels: *Exceeding Expectations, Meeting Expectations, Partially Meeting Expectations, and Not Meeting Expectations.* The descriptors below illustrate the knowledge and skills students demonstrate on MCAS at each level. Knowledge and skills are cumulative at each level. No descriptors are provided for the *Not Meeting Expectations* achievement level because students work at this level, by definition, does not meet the criteria of the *Partially Meeting Expectations* level.

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|  | **Partially Meeting Expectations On MCAS, a student at this level:** | **Meeting Expectations On MCAS, a student at this level:** | **Exceeding Expectations On MCAS, a student at this level:** |
| **Conceptual Understanding and Procedural Knowledge**  | * Demonstrates partial understanding of the grade appropriate numeration system
* Performs some calculations and estimations
* Identifies examples of basic math facts or mathematical concepts
* Mostly reads and sometimes constructs graphs, tables and charts
 | * Applies understanding of the base-ten system and fractions to interpret numbers and solve problems
* Performs most calculations and estimations
* Describes mathematical concepts and generates examples and counterexamples of concepts
* Represents data and mathematical relationships using equations, verbal descriptions, tables, and graphs
 | * Performs complex calculations and estimations
* Selects the best representations for a given set of data
* Explains relationships between models such as equations, verbal descriptions, tables, and graphs
* Applies math facts and connects mathematical concepts from various areas of mathematics, and uses the concepts to develop generalizations
* Recognizes and makes use of structure, discerning patterns by seeing complicated things as single objects
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| **Problem Solving**  | * Applies learned procedures to solve routine problems
* Uses concrete objects or pictures to help conceptualize and solve problems.
 | * Applies learned procedures and mathematical concepts to solve a variety of problems, including multi-step problems
* Solves problems using multiple methods
* Demonstrates the relationships between operations used to solve problems and the context of the problems
 | * Generates strategies and procedures to solve non-routine problems
* Solves problems using multiple methods, evaluating reasonableness of intermediate steps leading to the standard algorithms
* Draws connections between strategies
* Analyzes givens, constraints, and relationships in problems, using multiple methods and appropriate tools
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| **Mathematical Reasoning** | * Applies some reasoning methods to solve routine problems
 | * Uses a variety of reasoning methods to solve routine and non-routine problems
* Uses symbols to solve routine mathematical problems
 | * Reasons abstractly and quantitatively, using multiple reasoning methods to solve complex problems and provides justification for the reasoning
* Decontextualizes situations and represents them symbolically
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| **Mathematical Communication**  | * Identifies and uses basic terms
 | * Uses logical forms of representation (e.g., text, graphs, symbols) to illustrate steps to a solution
 | * Uses logical forms of representation (e.g., text, graphs, symbols) to justify solutions and solution strategies
* Constructs viable arguments and critiques the reasoning of others, attending to precision
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