**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 |
| **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 |
| **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 |
| **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 |