

Interpreting Science MCA-III Test Scores

The 2012 Science MCA-III's were the first administration of Minnesota science assessments based on the 2009 Science Minnesota Academic Standards. Because these are new assessments aligned to new content standards, new achievement levels were determined in conjunction with Minnesota educators through a formal standard setting process. It is important to recognize that scores on the Science MCA-II and MCA-III assessments are not directly comparable, because they reflect different content and achievement standards. Moreover, there are some changes in how strand and substrand scores are reported that must be understood in order to correctly interpret those scores.

For Science MCA-III, all scores (overall, strand and substrand) are reported as “scale scores”. The raw score point total earned on each scale is converted to a scale score. The conversion takes into account the number and difficulty of items scored. A scale score has equivalent meaning and provides a basis for valid comparison from year to year for a given grade and reporting category. Both overall test scores and scores on strands and/or substrands (called sub-scores) are reported. For Science MCA-III, sub-scores are reported at the strand level for grades 5 and 8. Sub-scores are reported at the strand and substrand level for high school.

Overall Test Score

- Raw scores are converted to scale scores.
- Scale scores range from 1–99 and are reported as G01-G99, where “G” represents the grade level (e.g., 501-599 is the grade 5 scale and 1001-1099 is the high school scale),
- Achievement levels are aligned to the scale so that the cut score for “Meets the Standards” is G50 and the cut score for “Partially Meets the Standards” is G40. The cut score for “Exceeds the Standards” varies by grade and year.

Achievement Level	Grade 5 Scale Score	Grade 8 Scale Score	High School Scale Score
Exceeds the Standards	570	863	1063
Meets the Standards	550	850	1050
Partially Meets the Standards	540	840	1040
Does Not Meet the Standards	<540	<840	<1040

- For MCA-III, the same scale is used as for MCA-II, but scores on the two series of tests are not directly comparable.

Strand and Substrand Scores

- For MCA-III, strand and substrand scores are reported as scale scores on a 1-9 point scale.

Performance at Strand or Substrand Level	Scale Score Range
Above average performance	7-9
Average performance	4-6
Below average performance	1-3

- These scaled strand and substrand scores allow for comparison of subscores within a grade and across years, beginning with 2012.
- These subscores are not directly comparable to strand and substrand scores on the MCA-II, which were based on raw score points earned.

The school, district, and state averages for these results are available at the MDE website under Data Center > Data Reports and Analytics in the following locations:

- Accountability and Assessment > Assessment and Growth Files (Excel and tab-delimited data download files)
- Accountability and Assessment > Sub Score Report
- MDE Secured Reports > Test Results Summary (login required to access)