

## 8th-Grade Science MCA-III Assessment Details

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### Estimated Test Administration Times for Science MCA (2017-2018)

Grade	Field Test and Operational Items in Section 1	Field Test and Operational Items in Section 2	Total Test Administration
8	31–35	31–35	1.5–2 hours

### Item Type

The table indicates the type and number of items for the fixed form Science MCA.

Grade	MC Items (1 point)	Technology-Enhanced Items (1 point)	Total Operational Items/Points
8	40-60%	40-60%	51

## Target Item Counts by Depth of Knowledge

The MCA-III are constructed with minimum target percentages for items at DOK levels 1, 2 and 3. The table shows the target percentages and item counts by DOK levels.

### Minimum Item Count Targets by DOK Level

Grades	DOK Level 1	DOK Level 2	DOK Level 3
5, 8, and High School	40–60%	35–55%	5–10%

## Item Count by Strand

The following tables provide the approximate number of points by strand on the operational test for each grade. The [Achievement Level Descriptors](#) are another tool to look at alongside the academic standards.

### Operational Form Science MCA-III Grade 8 Minimum and Maximum Item Counts by Strand

Strand	Range of Items per Strand	Substrand Name	Substrand Code	Range of Items per Substrand
1 – Nature of Science and Engineering	13-15	1.Practice of Science	(X).1.1	4-6
		2.Practice of Engineering	(X).1.2	3-5
		3.Interactions Among STEM and Society	(X).1.3	5-7
2 – Physical Science	11-13	1.Matter	(X).2.1	5-7
		2.Motion	(X).2.2	3-5
		3.Energy	(X).2.3	3-5

Strand	Range of Items per Strand	Substrand Name	Substrand Code	Range of Items per Substrand
3 – Earth and Space Science	11-13	1.Earth Structure and Processes	(X).3.1	5-7
		2.Interdependence within the Earth System	(X).3.2	3-5
		3.The Universe	(X).3.3	2-4
		4.Human Interactions with Earth Systems	(X).3.4	1-3
4 – Life Science	11-13	1.Structure and Function in Living Systems	(X).4.1	4-6
		2.Interdependence Among Living Systems	(X).4.2	3-5
		3.Evolution in Living Systems	(X).4.3	3-5
		4.Human Interactions with Living Systems	(X).4.4	1-3

(X)= grade level within the grade band 6, 7, or 8

Please refer to the Minnesota [Test Specifications](#) document for further information.