

The following document describes the structure and content of the Maryland Integrated Science Assessment (MISA) for middle school that is administered at the end of eighth grade.

## STANDARDS

---

The grade 8 MISA uses all the Middle School Performance Expectations (grades 6 through 8) from the Maryland Next Generation Science Standards (NGSS). Not all performance expectations will appear on a single assessment, but they will be rotated over time so that all performance expectations will be assessed in a regular cycle.

## SESSIONS

---

The table indicates the structure of the grade 8 MISA by sessions.

Session	Time	Item Sets
1	40 minutes	2
2	40 minutes	2
3	40 minutes	2
4	40 minutes	2

## REPORTING CATEGORIES

The tables indicate the breakdown of items on the Grade 8 MISA by reporting category.

### SCIENCE DOMAINS

Domain	Performance Expectations	Percent of Blueprint
Earth and Space Science	Any of the Middle School Earth and Space Science Performance Expectations	30 to 35%
Life Science	Any of the Middle School Life Science Performance Expectations	30 to 35%
Physical Science	Any of the Middle School Physical Science Performance Expectations	30 to 35%

**SCIENCE AND ENGINEERING PRACTICES (SEP) CATEGORIES**

Science and Engineering Practices	Earth and Space Performance Expectations	Life Science Performance Expectations	Physical Science Performance Expectations	Percent of Blueprint
Investigating Science and Engineering Practices <ul style="list-style-type: none"> <li>Asking questions (for science) and defining problems (for engineering)</li> <li>Planning and carrying out investigations</li> <li>Using mathematics and computational thinking</li> </ul>	MS-ESS2-5 MS-ESS3-5	MS-LS1-1 MS-LS4-6	MS-PS2-2 MS-PS2-3 MS-PS2-5 MS-PS3-4 MS-PS4-1	17 to 33%
Sensemaking Science and Engineering Practices <ul style="list-style-type: none"> <li>Developing and using models</li> <li>Analyzing and interpreting data</li> <li>Constructing explanations (for science) and designing solutions (for engineering)</li> </ul>	MS-ESS1-1 MS-ESS1-2 MS-ESS1-3 MS-ESS1-4 MS-ESS2-1 MS-ESS2-2 MS-ESS2-3 MS-ESS2-4 MS-ESS2-6 MS-ESS3-1 MS-ESS3-2 MS-ESS3-3	MS-LS1-2 MS-LS1-5 MS-LS1-6 MS-LS1-7 MS-LS2-1 MS-LS2-2 MS-LS2-3 MS-LS3-1 MS-LS3-2 MS-LS4-1 MS-LS4-2 MS-LS4-3 MS-LS4-4	MS-PS1-1 MS-PS1-2 MS-PS1-4 MS-PS1-5 MS-PS1-6 MS-PS2-1 MS-PS3-1 MS-PS3-2 MS-PS3-3 MS-PS4-2	50 to 67%
Critiquing Science and Engineering Practices <ul style="list-style-type: none"> <li>Engaging in argument from evidence</li> <li>Obtaining, evaluating, and communicating information</li> </ul>	MS-ESS3-4	MS-LS1-3 MS-LS1-4 MS-LS1-8 MS-LS2-4 MS-LS2-5 MS-LS4-5	MS-PS1-3 MS-PS2-4 MS-PS3-5 MS-PS4-3	17 to 33%