Maryland
STATE DEPARTMENT OF EDUCATION

Maryland Integrated Science Assessment

Life Science High Level Blueprint

The following document describes the structure and content of the Maryland Integrated Science Assessment (MISA) for high school that is administered at the end of the student's life science (Biology) course.

STANDARDS

The Life Science (LS) MISA uses the 24 identified life science performance expectations from the Maryland Next Generation Science Standards (NGSS) found in the high school grade band. Not all performance expectations may appear on a single assessment, but they will be rotated over time so that all life science performance expectations will be assessed in a regular cycle.

SESSIONS

The table indicates the structure of the LS 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 LS MISA by reporting category.

DISCIPLINARY CORE IDEA (DCI) TOPICS

Topic	Performance Expectations	Percent of Blueprint
Structure and Function	HS-LS1-1 HS-LS1-2 HS-LS1-3	12 to 17%
Matter and Energy in Organisms and Ecosystems	HS-LS1-5 HS-LS1-6 HS-LS1-7 HS-LS2-3 HS-LS2-4 HS-LS2-5	20 to 25%
Interdependent Relationships in Ecosystems	HS-LS2-1 HS-LS2-2 HS-LS2-6 HS-LS2-7 HS-LS2-8 HS-LS4-6	20 to 25%
Inheritance and Variation of Traits	HS-LS1-4 HS-LS3-1 HS-LS3-2 HS-LS3-3	18 to 22%
Natural Selection and Evolution	HS-LS4-1 HS-LS4-2 HS-LS4-3 HS-LS4-4 HS-LS4-5	18 to 22%

SCIENCE AND ENGINEERING PRACTICES (SEP) CATEGORIES

Science and Engineering Practices	Performance Expectations	Percent of Blueprint
Investigating Science and Engineering Practices • Asking questions (for science) and defining problems (for engineering) • Planning and carrying out investigations • Using mathematics and computational thinking	HS-LS1-3 HS-LS2-1 HS-LS2-2 HS-LS2-4 HS-LS3-1 HS-LS4-6	25 to 35%
Sensemaking Science and Engineering Practices • Developing and using models • Analyzing and interpreting data • Constructing explanations (for science) and designing solutions (for engineering)	HS-LS1-1 HS-LS1-2 HS-LS1-4 HS-LS1-5 HS-LS1-6 HS-LS1-7 HS-LS2-3 HS-LS2-5 HS-LS2-7 HS-LS3-3 HS-LS4-2 HS-LS4-3 HS-LS4-4	35 to 45%
Critiquing Science and Engineering Practices • Engaging in argument from evidence • Obtaining, evaluating, and communicating information	HS-LS2-6 HS-LS2-8 HS-LS3-2 HS-LS4-1 HS-LS4-5	25 to 35%