

Middle School Performance Expectations (18)

Physical Science	1-4 (Grades 2;5;8)	1-5 (Grade 8)	2-1 (Grades K;3;5;8)	2-3 (Grades 3;8)	3-3 (Grades 4;8)
Life Science	1-1 (Grades K;1;3;4;5;7)	1-5 (Grade 7)	1-7 (Grade 7)	2-2 (Grades 2;7)	2-3 (Grade 7)
	3-2 (Grades 3;7)	4-1 (Grades 2;3;7)	4-2 (Grades 3;7)	4-5 (Grade 7)	
Earth & Space Science	1-3 (Grade 6)	2-2 (Grades K;2;3;4;5;6)	2-4 (Grade 6)	3-1 (Grades K;3;4;5;6)	

Use the links below to review topics that will be covered on the MISA test. Focus on the sections that are listed before each link!

6th grade Earth and Space Science

MS-ESS1-3.

Analyze and interpret data to determine scale properties of objects in the solar system.

<https://www.ck12.org/ngss/middle-school-earth-and-space-sciences/earth%E2%80%99s-place-in-the-universe>

MS-ESS2-2.

Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.

MS-ESS2-4.

Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity.

<https://www.ck12.org/ngss/middle-school-earth-and-space-sciences/earth%E2%80%99s-systems>

MS-ESS3-1.

Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.

<https://www.ck12.org/ngss/middle-school-earth-and-space-sciences/earth-and-human-activity>

7th grade Life Science

MS-LS1-1.

Conduct an investigation to provide evidence that living things are made of cells; either one cell or many different numbers and types of cells.

MS-LS1-5.

Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.

MS-LS1-7.

Develop a model to describe how food is rearranged through chemical reactions forming new molecules that support growth and/or release energy as this matter moves through an organism.

<https://www.ck12.org/ngss/middle-school-life-sciences/from-molecules-to-organisms:-structures-and-processes>

MS-LS2-2.

Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.

MS-LS2-3.

Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.

<https://www.ck12.org/ngss/middle-school-life-sciences/ecosystems:-interactions,-energy,-and-dynamics>

MS-LS3-2.

Develop and use a model to describe why asexual reproduction results in offspring with identical genetic information and sexual reproduction results in offspring with genetic variation.

<https://www.ck12.org/ngss/middle-school-life-sciences/heredity:-inheritance-and-variation-of-traits>

MS-LS4-1.

Analyze and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and change of life forms throughout the history of life on Earth under the assumption that natural laws operate today as in the past.

MS-LS4-2.

Apply scientific ideas to construct an explanation for the anatomical similarities and differences among modern organisms and between modern and fossil organisms to infer evolutionary relationships.

MS-LS4-5.

Gather and synthesize information about the technologies that have changed the way humans influence the inheritance of desired traits in organisms.

<https://www.ck12.org/ngss/middle-school-life-sciences/biological-evolution:-unity-and-diversity>

8th grade Physical Science

MS-PS1-4.

Develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed.

MS-PS1-5.

Develop and use a model to describe how the total number of atoms does not change in a chemical reaction and thus mass is conserved.

<https://www.ck12.org/ngss/middle-school-physical-sciences/matter-and-its-interactions>

MS-PS2-1.

Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects.

MS-PS2-3.

Ask questions about data to determine the factors that affect the strength of electric and magnetic forces.

<https://www.ck12.org/ngss/middle-school-physical-sciences/motion-and-stability:-forces-and-interactions>

MS-PS3-3.

Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.

<https://www.ck12.org/ngss/middle-school-physical-sciences/energy>