

Grade 7 Life Science

Related Schoolwide Learner Outcomes

Structure, Function, and Information Processing

- ☐ MS-LS1-1: I can provide evidence that living things are made of cells. I can show that some things are made of one cell while others are made of many different numbers and types of cells.
- ☐ MS-LS1-2: I can construct a model of a cell that shows how all of the parts work together to help the cell function.
- ☐ MS-LS1-3: I can describe the body as a system. I can explain the subsystems that work together so that the body can function. I can discuss the relationships between cells, tissues, and organs.
- ☐ MS-LS1-8: I can demonstrate how our senses answer to stimuli by sending messages to the brain causing quick reactions or storage as memories.

Matter and Energy in Organisms and Ecosystems

- ☐ MS-LS1-6: I can explain how photosynthesis is involved in the movement of matter. I can talk about how energy moves into and out of living things.
- ☐ MS-LS1-7: I can make a model to show how the molecules in food get rearranged during chemical reactions. I know that energy is released when this happens.
- ☐ MS-LS2-1: I can look closely at data. I can give evidence that shows how available resources affect organisms in an ecosystem.
- ☐ MS-LS2-3: I can create a model that shows the way energy flows in living and nonliving parts of an ecosystem.
- ☐ MS-LS2-4: I can look closely at evidence. I can use this evidence to discuss the ways that different types of changes affect populations in an ecosystem.

Interdependent Relationships in Ecosystems

- ☐ MS-LS2-2: I can predict how organisms will interact with each other.
- ☐ MS-LS2-5: I can talk about different solutions that could be used to maintain biodiversity and preserve ecosystems.

Growth, Development, and Reproduction of Organisms

- ☐ MS-LS1-4: I can explain how some animal behaviors help them to successfully reproduce. I can explain how some plant structures allow plants to successfully reproduce. I can back up my explanations with facts.
- ☐ MS-LS1-5: I can explain how environmental factors affect the growth of organisms. I can explain how genetic factors affect the growth of organisms. I can back up my explanations with facts.
- ☐ MS-LS3-1: I can create a model to show how genetic mutations on chromosomes can affect an organism's proteins. I can explain that these changes may be helpful, harmful, or have no effect on the organism.
- ☐ MS-LS3-2: I can create models (Punnett squares, diagrams, etc.) to explain why asexual reproduction results in offspring with identical genetic information. I can explain why sexual reproduction results in offspring with genetic variation. I can support my explanations with models.
- ☐ MS-LS4-5: I can talk about the ways that technology has made it possible to increase desired traits in organisms.

Natural Selection and Adaptations

- ☐ MS-LS4-1: I can look closely at patterns in fossil records. I know that these records show the existence, diversity, extinction, and changes in life forms throughout history.
- ☐ MS-LS4-2: I can make inferences about evolutionary relationships by comparing modern organisms to fossil organisms.
- ☐ MS-LS4-3: I can look closely at and compare pictures that show the early growth of different organisms. I can use this information to identify relationships across multiple species.
- ☐ MS-LS4-4: I can tell you how and why some traits help an individual survive and reproduce.
- ☐ MS-LS4-6: I can use math to help explain how natural selection can lead to more or less of specific traits over time.

Engineering Design

- ☐ MS-ETS1-1: I can develop a successful solution to a design problem using scientific principles. I can compare the pros and cons of my solution in order to determine if it is reasonable.
- ☐ MS-ETS1-2: I can test my design solutions to determine whether or not they will solve the problem.

- ☐ MS-ETS1-3: I can use the data gathered from tests to determine which design solution will best solve the problem.
- ☐ MS-ETS1-4: I can develop a model of the design that can be tested and modified to create a successful prototype.



Grade 7 Integrated Science

Related Schoolwide Learner Outcomes

Life Science

- ☐ MS-LS1-6: I can explain how photosynthesis is involved in the movement of matter. I can talk about how energy moves into and out of living things.
- ☐ MS-LS1-7: I can make a model to show how the molecules in food get rearranged during chemical reactions. I know that energy is released when this happens.
- ☐ MS-LS2-1: I can look closely at data. I can give evidence that shows how available resources affect organisms in an ecosystem.
- ☐ MS-LS2-2: I can predict how organisms will interact with each other.
- ☐ MS-LS2-3: I can create a model that shows the way energy flows in living and nonliving parts of an ecosystem.
- ☐ MS-LS2-4: I can look closely at evidence. I can use this evidence to discuss the ways that different types of changes affect populations in an ecosystem.
- ☐ MS-LS2-5: I can talk about different solutions that could be used to maintain biodiversity and preserve ecosystems.

Earth and Space Science

- ☐ MS-ESS2-1: I can describe the process of weathering and erosion on Earth's surface.
- ☐ MS-ESS2-2: I can discuss how plate motions and natural disasters have contributed to changes in Earth's surface.
- ☐ MS-ESS2-3: I can use data from fossils and rocks, continental shapes, and seafloor structures to provide evidence of past plate motions.
- ☐ MS-ESS3-1: I can discuss the events that have led to uneven distributions of Earth's mineral, energy, and groundwater resources.
- ☐ MS-ESS3-2: I can use information that I have learned about natural disasters in the past to come up with ideas for limiting the potential destruction that they can cause in the future.

Physical Science

- ☐ MS-PS1-1: I can make models to show how atoms are arranged in simple molecules (like ammonia), as well as extended structures (like sodium chloride).

- ☐ MS-PS1-2: I can tell you if a chemical reaction has occurred by looking closely at data on the properties of substances before and after they interact with each other.
- ☐ MS-PS1-3: I can gather and understand information to explain that synthetic materials are actually made from natural resources.
- ☐ MS-PS1-4: I can make a model that predicts and describes how a pure substance changes when thermal energy is added or taken away.
- ☐ MS-PS1-5: I can make and use a model to show that the total number of atoms does not change during a chemical reaction. I know that mass is conserved during a chemical reaction.
- ☐ MS-PS1-6: I can build, test, and modify a device that either releases or absorbs thermal energy by chemical processes.

Engineering Design

- ☐ MS-ETS1-1: I can develop a successful solution to a design problem using scientific principles. I can compare the pros and cons of my solution in order to determine if it is reasonable.
- ☐ MS-ETS1-2: I can test my design solutions to determine whether or not they will solve the problem.
- ☐ MS-ETS1-3: I can use the data gathered from tests to determine which design solution will best solve the problem.
- ☐ MS-ETS1-4: I can develop a model of the design that can be tested and modified to create a successful prototype.