

DCI: From Molecules to Organisms: Structures and Processes

1.LS1.A: Structure and Function

All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water and air. Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow. (1-LS1-1)

DCI: From Molecules to Organisms: Structures and Processes

1.LS1.B: Growth and Development of Organisms

Adult plants and animals can have young. In many kinds of animals, parents and the offspring themselves engage in behaviors that help the offspring to survive. (1-LS1-2)

DCI: From Molecules to Organisms: Structures and Processes

1.LS1.D: Information Processing

Animals have body parts that capture and convey different kinds of information needed for growth and survival. Animals respond to these inputs with behaviors that help them survive. Plants also respond to some external inputs. (1-LS1-1)

Performance Expectation

1-LS1-1: Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.

Clarification Statement: Examples of human problems that can be solved by mimicking plant or animal solutions could include designing clothing or equipment to protect bicyclists by mimicking turtle shells, acorn shells, and animal scales; stabilizing structures by mimicking animal tails and roots on plants; keeping out intruders by mimicking thorns on branches and animal quills; and, detecting intruders by mimicking eyes and ears.

Assessment Boundary: none

Performance Expectation

1-LS1-2: Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.

Clarification Statement: Examples of patterns of behaviors could include the signals that offspring make (such as crying, cheeping, and other vocalizations) and the responses of the parents (such as feeding, comforting, and protecting the offspring).

Assessment Boundary: none

Science and Engineering Practice

Constructing Explanations and Designing Solutions

Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomenon and designing solutions.

Use materials to design a device that solves a specific problem or a solution to a specific problem. (1-LS1-1)

Science and Engineering Practice

Obtaining, Evaluating, and Communicating Information

Obtaining, evaluating, and communicating information in K–2 builds on prior experiences and uses observations and texts to communicate new information.

Read grade-appropriate texts and use media to obtain scientific information to determine patterns in the natural world. (1-LS1-2)

Crosscutting Concept

Patterns

Patterns in the natural and human designed world can be observed, used to describe phenomena, and used as evidence. (1-LS1-2)

Crosscutting Concept

Structure and Function

The shape and stability of structures of natural and designed objects are related to their function(s). (1-LS1-1)

Connection to Nature of Science

Science Knowledge Is Based on Empirical Evidence

Scientists look for patterns and order when making observations about the world. (1-LS1-2)

Connection to Engineering, Technology, and Applications of Science

Influence of Science, Engineering, and Technology on Society and the Natural World

Every human-made product is designed by applying some knowledge of the natural world and is built using materials derived from the natural world. (1-LS1-1)

Common Core State Standards for ELA/Literacy

Reading Informational Text

RI.1.1 - Key Ideas and Details

Ask and answer questions about key details in a text. (1-LS1-2)

Common Core State Standards for ELA/Literacy

Reading Informational Text

RI.1.10 - Range of Reading and Level of Text Complexity

With prompting and support, read informational texts appropriately complex for grade 1. (1-LS1-2)

Common Core State Standards for ELA/Literacy

Reading Informational Text

RI.1.2 - Key Ideas and Details

Identify the main topic and retell key details of a text. (1-LS1-2)

Common Core State Standards for ELA/Literacy

Card Type name

W.1.7 - Research to Build and Present Knowledge

Participate in shared research and writing projects (e.g., explore a number of “how-to” books on a given topic and use them to write a sequence of instructions). (1-LS1-1)

Common Core State Standards for Mathematics

Card Type name

1.NBT.B.3 - undefined

Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.

(1-LS1-2)

Common Core State Standards for Mathematics

Card Type name

1.NBT.C.4 - undefined

Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten. (1-LS1-2)

Common Core State Standards for Mathematics

Card Type name

1.NBT.C.5 - undefined

Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used. (1-LS1-2)

Common Core State Standards for Mathematics

Card Type name

1.NBT.C.6 - undefined

Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. (1-LS1-2)