DCI: From Molecules to Organisms: Structures and Processes

4.LS1.A: Structure and Function

Plants and animals have both internal and external structures that serve various functions in growth, survival, behavior, and reproduction. (4-LS1-1)

DCI: From Molecules to Organisms: Structures and Processes

4.LS1.D: Information Processing

Different sense receptors are specialized for particular kinds of information, which may be then processed by the animal's brain. Animals are able to use their perceptions and memories to guide their actions. (4-LS1-2)

Performance Expectation

4-LS1-1: Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.

Clarification Statement: Examples of structures could include thorns, stems, roots, colored petals, heart, stomach, lung, brain, and skin.
Assessment Boundary: Assessment is limited to macroscopic structures within plant and animal systems.

Performance Expectation

4-LS1-2: Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.

Clarification Statement: Emphasis is on systems of information transfer.
Assessment Boundary: Assessment does not include the mechanisms by which the brain stores and recalls information or the mechanisms of how sensory receptors function.

Science and Engineering Practice

Developing and Using Models

Modeling in 3–5 builds on K–2 experiences and progresses to building and revising simple models and using models to represent events and design solutions.

Use a model to test interactions concerning the functioning of a natural system. (4-LS1-2)

Science and Engineering Practice

Engaging in Argument from Evidence

Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s).

Construct an argument with evidence, data, and/or a model. (4-LS1-1)

Crosscutting Concept

Systems and System Models

A system can be described in terms of its components and their interactions. (4-LS1-1), (4-LS1-2)

Common Core State Standards for ELA/Literacy

Speaking & Listening

SL.4.5 - Presentation of Knowledge and Ideas

Add audio recordings and visual displays to presentations when appropriate to enhance the development of main ideas or themes. (4-LS1-2)

Common Core State Standards for ELA/Literacy

Card Type name

W.4.1 - Text Types and Purposes

Write opinion pieces on topics or texts, supporting a point of view with reasons and information. (4-LS1-1)

Common Core State Standards for Mathematics

Geometry

4.G.A.3 - Draw and identify lines and angles, and classify shapes by properties of their lines and angles.

Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry. (4-LS1-1)