DCI: Heredity: Inheritance and Variation of Traits

3.LS3.A: Inheritance of Traits

Many characteristics of organisms are inherited from their parents.
(3-LS3-1)

DCI: Heredity: Inheritance and Variation of Traits

3.LS3.A: Inheritance of Traits

Other characteristics result from individuals' interactions with the environment, which can range from diet to learning. Many characteristics involve both inheritance and environment. (3-LS3-2)

DCI: Heredity: Inheritance and Variation of Traits

3.LS3.B: Variation of Traits

Different organisms vary in how they look and function because they have different inherited information. (3-LS3-1)

DCI: Heredity: Inheritance and Variation of Traits

3.LS3.B: Variation of Traits

The environment also affects the traits that an organism develops. (3-LS3-2)

Performance Expectation

3-LS3-1: Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms.

Clarification Statement: Patterns are the similarities and differences in traits shared between offspring and their parents, or among siblings. Emphasis is on organisms other than humans.

Assessment Boundary: Assessment does not include genetic mechanisms of inheritance and prediction of traits. Assessment is limited to non-human examples.

Performance Expectation

3-LS3-2: Use evidence to support the explanation that traits can be influenced by the environment.

Clarification Statement: Examples of the environment affecting a trait could include normally tall plants grown with insufficient water are stunted; and, a pet dog that is given too much food and little exercise may become overweight.

Assessment Boundary: none

Science and Engineering Practice

Analyzing and Interpreting Data

Analyzing data in 3–5 builds on K–2 experiences and progresses to introducing quantitative approaches to collecting data and conducting multiple trials of qualitative observations. When possible and feasible, digital tools should be used.

Analyze and interpret data to make sense of phenomena using logical reasoning. (3-LS3-1)

Science and Engineering Practice

Constructing Explanations and Designing Solutions

Constructing explanations and designing solutions in 3–5 builds on K–2 experiences and progresses to the use of evidence in constructing explanations that specify variables that describe and predict phenomena and in designing multiple solutions to design problems.

Use evidence (e.g., observations, patterns) to support an explanation. (3-LS3-2)

Crosscutting Concept

Patterns

Similarities and differences in patterns can be used to sort and classify natural phenomena. (3-LS3-1)

Cause and Effect

Cause and effect relationships are routinely identified and used to explain change. (3-LS3-2)

Reading Informational Text

RI.3.1 - Key Ideas and Details

Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3-LS3-1), (3-LS3-2)

Reading Informational Text

RI.3.2 - Key Ideas and Details

Determine the main idea of a text; recount the key details and explain how they support the main idea. (3-LS3-1), (3-LS3-2)

Reading Informational Text

RI.3.3 - Key Ideas and Details

Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect. (3-LS3-1), (3-LS3-2)

Speaking & Listening

SL.3.4 - Presentation of Knowledge and Ideas

Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace. (3-LS3-1), (3-LS3-2)

Card Type name

W.3.2 - Text Types and Purposes

Write informative/explanatory texts to examine a topic and convey ideas and information clearly. (3-LS3-1), (3-LS3-2)

Common Core State Standards for Mathematics

Measurement & Data
3.MD.B.4 - Represent and interpret data.

Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate unitsâ€" whole numbers, halves, or quarters. (3-LS3-1), (3-LS3-2)

Common Core State Standards for Mathematics

Mathematical Practices
MP.2 - Reason abstractly and quantitatively

CCSS text (3-LS3-1), (3-LS3-2)

Common Core State Standards for Mathematics

Mathematical Practices
MP.4 - Model with mathematics

CCSS text (3-LS3-1), (3-LS3-2)