Disciplinary Core Idea

3.LS1.B: Growth and Development of Organisms

Reproduction is essential to the continued existence of every kind of organism. Plants and animals have unique and diverse life cycles. (3-LS1-1)

Disciplinary Core Idea

3.LS3.A: Inheritance of Traits

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

Disciplinary Core Idea

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)

Disciplinary Core Idea

3.LS3.B: Variation of Traits

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

Disciplinary Core Idea

3.LS3.B: Variation of Traits

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

Disciplinary Core Idea

3.LS4.B: Natural Selection

Sometimes the differences in characteristics between individuals of the same species provide advantages in surviving, finding mates, and reproducing. (3-LS4-2)

Disciplinary Core Idea

3.LS4.C: Adaptation

For any particular environment, some kinds of organisms survive well, some survive less well, and some cannot survive at all. (3-LS4-3)

Performance Expectation

3-LS1-1: Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.

Clarification Statement: Changes organisms go through during their life form a pattern.
Assessment Boundary: Assessment of plant life cycles is limited to those of flowering plants. Assessment does not include details of human reproduction.

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

Performance Expectation

3-LS4-2: Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.

Clarification Statement: Examples of cause and effect relationships could be plants that have larger thorns than other plants may be less likely to be eaten by predators; and, animals that have better camouflage coloration than other animals may be more likely to survive and therefore more likely to leave offspring.
Assessment Boundary: none

Performance Expectation

3-LS4-3: Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.

Clarification Statement: Examples of evidence could include needs and characteristics of the organisms and habitats involved. The organisms and their habitat make up a system in which the parts depend on each other.
Assessment Boundary: none

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.

Develop models to describe phenomena. (3-LS1-1)

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)

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 construct an explanation. (3-LS4-2)

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. (3-LS4-3)

Crosscutting Concept

Patterns

Patterns of change can be used to make predictions (3-LS1-1)

Crosscutting Concept

Patterns

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

Crosscutting Concept

Cause and Effect

Cause and effect relationships are routinely identified and used to explain change. (3-LS3-2), (3-LS4-2)

Crosscutting Concept

Cause and Effect

Cause and effect relationships are routinely identified and used to explain change. (3-LS4-3)

Connection to Nature of Science

Science Knowledge Is Based on Empirical Evidence

Science findings are based on recognizing patterns. (3-LS1-1)

Common Core State Standards for ELA/Literacy

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), (3-LS4-2)

Common Core State Standards for ELA/Literacy

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), (3-LS4-2)

Common Core State Standards for ELA/Literacy

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), (3-LS4-2)

Common Core State Standards for ELA/Literacy

Reading Informational Text

RI.3.7 - Integration of Knowledge and Ideas

Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur). (3-LS1-1)

Common Core State Standards for ELA/Literacy

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), (3-LS4-2)

Common Core State Standards for ELA/Literacy

Speaking & Listening

SL.3.5 - Presentation of Knowledge and Ideas

Create engaging audio recordings of stories or poems that demonstrate fluid reading at an understandable pace; add visual displays when appropriate to emphasize or enhance certain facts or details. (3-LS1-1)

Common Core State Standards for ELA/Literacy

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), (3-LS4-2)

Common Core State Standards for Mathematics

Measurement & Data

3.MD.B.3 - Represent and interpret data.

Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. (3-LS4-2)

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

Number & Operations in Base Ten

3.NBT - Use place value understanding and properties of operations to perform multi-digit arithmetic.

Number and Operations in Base Ten. (3-LS1-1)

Common Core State Standards for Mathematics

Number & Operations--Fractions

3.NF - Develop understanding of fractions as numbers.

Number and Operations—Fractions (3-LS1-1)

Common Core State Standards for Mathematics

Mathematical Practices

MP.2 - Reason abstractly and quantitatively

Reason abstractly and quantitatively. (3-LS3-1), (3-LS3-2), (3-LS4-2)

Common Core State Standards for Mathematics

Mathematical Practices

MP.4 - Model with mathematics

Model with mathematics. (3-LS1-1), (3-LS3-1), (3-LS3-2), (3-LS4-2)