3-LS3 Heredity: Inheritance and Variation of Traits

Students who demonstrate understanding can:

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.]

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.]

The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education: Practices, Cross-Cutting Concepts, and Core Ideas. Integrated Articulation of DCIs across grade levels:

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

3-LS3 B: Variation of Traits
- Different organisms vary in how they look and function because they have different inherited information. (3-LS3-1)
- The environment also affects the traits that an organism develops. (3-LS3-2)

Connections to other DCIs in third grade: N/A

Articulation of DCIs across grade-levels: 1.LS3.A (3-LS3-1); 1.LS3.B (3-LS3-1); MS.LS1.B (3-LS3-2); MS.LS3.A (3-LS3-1); MS.LS3.B (3-LS3-1)

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