**3-LS1 From Molecules to Organisms: Structures and Processes**

Students who demonstrate understanding can:

**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.]

The performance expectations above were developed using the following elements from the NRC document *A Framework for K-12 Science Education*:

- **Science and Engineering Practices**
  - 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)

- **Disciplinary Core Ideas**
  - **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)

- **Crosscutting Concepts**
  - Patterns:
    - Patterns of change can be used to make predictions. (3-LS1-1)

- **Scientific Knowledge Is Based on Empirical Evidence**
  - Science findings are based on recognizing patterns. (3-LS1-1)

**Connections to Nature of Science**
- Science findings are based on recognizing patterns. (3-LS1-1)

**Connections to other DCIs in third grade:** N/A

**Articulation of DCIs across grade-levels:**
- **MS.LS1.B** (3-LS1-1)

**Common Core State Standards Connections:**
- **ELA/Literacy**
  - **RI.3.7** 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)
  - **SL.3.5** 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)

- **Mathematics**
  - **MP.4** Model with mathematics. (3-LS1-1)
  - **3.NBT** Number and Operations in Base Ten (3-LS1-1)
  - **3.NF** Number and Operations—Fractions (3-LS1-1)

*The performance expectations marked with an asterisk integrate traditional science content with engineering through a Practice or Disciplinary Core Idea. The section entitled "Disciplinary Core Ideas" is reproduced verbatim from *A Framework for K-12 Science Education: Practices, Cross-Cutting Concepts, and Core Ideas*. Integrated and reprinted with permission from the National Academy of Sciences.*