## 5-PS3 Energy

Students who demonstrate understanding can:

### 5-PS3-1. Use models to describe that energy in animals’ food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.

*Clarification Statement: Examples of models could include diagrams, and flow charts.*

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.

- Use models to describe phenomena. (5-PS3-1)

### Disciplinary Core Ideas

**PS3.D: Energy in Chemical Processes and Everyday Life**

- The energy released [from] food was once energy from the sun that was captured by plants in the chemical process that forms plant matter (from air and water). (5-PS3-1)

**LS1.C: Organization for Matter and Energy Flow in Organisms**

- Food provides animals with the materials they need for body repair and growth and the energy they need to maintain body warmth and for motion. (secondary to 5-PS3-1)

### Crosscutting Concepts

**Energy and Matter**

- Energy can be transferred in various ways and between objects. (5-PS3-1)

### Connections to other DCIs in fifth grade: N/A

**Articulation of DCIs across grade-levels:**  
- K.LS1.C (5-PS3-1); 2.LS2.A (5-PS3-1); 4.PS3.A (5-PS3-1); 4.PS3.B (5-PS3-1); 4.PS3.D (5-PS3-1); MS.PS3.D (5-PS3-1); MS.PS4.B (5-PS3-1); MS.LS1.C (5-PS3-1); MS.LS2.B (5-PS3-1)

**ELA/Literacy**

- RI.5.7: Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently. (5-PS3-1)

- SL.5.5: Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes. (5-PS3-1)

*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.*