

1. NGSS Performance Tasks

5-LS1-1 Support an argument that plants get the materials they need for growth chiefly from air and water. (Energy and Matter)

5-LS2-1 Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment. (Systems)

2. California Science Framework 2016

Grade 5 – Instructional Segment 2: From Matter to Organisms

Students who demonstrate understanding can:

5-LS1-1 Support an argument that plants get the materials they need for growth chiefly from air and water. [Clarification Statement: Emphasis is on the idea that plant matter comes mostly from air and water, not from the soil.]

5-LS2-1 Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment. [Clarification Statement: Emphasis is on the idea that matter that is not food (air, water, decomposed materials in soil) is changed by plants into matter that is food. Examples of systems could include organisms, ecosystems, and the Earth.] [Assessment Boundary: Assessment does not include molecular explanations.]

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.]

5-ESS2-1 Develop a model using an example to describe ways in which the geosphere, biosphere, hydrosphere, and/or atmosphere interact. [Clarification Statement: The geosphere, hydrosphere (including ice), atmosphere, and biosphere are each a system and each system is a part of the whole Earth System. Examples could include the influence of the ocean on ecosystems, landform shape, and climate; the influence of the atmosphere on landforms and ecosystems through weather and climate; and the influence of mountain ranges on winds and clouds in the atmosphere.] [Assessment Boundary: Assessment is limited to the interactions of two systems at a time.] (Introduced but not assessed until IS3)

Highlighted Science and Engineering Practices	Highlighted Disciplinary Core Ideas	Highlighted Crosscutting Concepts
Developing and Using Models	LS1.C: Organization for Matter and Energy Flow in Organisms LS2.A: Interdependent Relationships in Ecosystems LS2.B: Cycles of Matter and Energy Transfer in Ecosystems PS3.D: Energy in Chemical Processes and Everyday Life ESS2.A: Earth Materials and Systems	Systems and System Models Energy and Matter