

Grade 10

From Molecules to Organisms: Structures and Processes

- 1** Recognize organelles (e.g., mitochondria, ribosomes, chloroplasts) and their functions within plant and animal cells. [SCI.AAS.B.HS.1](#)

- 2a** Recognize the structure of DNA, which determines the characteristics of living organisms. [SCI.AAS.B.HS.2A](#)

- 3** Use a model to illustrate how growth occurs when cells multiply. [SCI.AAS.B.HS.3](#)

- 3b** Identify changes to cell development that may lead to changes in the organism. [SCI.AAS.B.HS.3B](#)

- 4** Recognize feedback mechanisms (e.g., sweating and shivering) that maintain homeostasis. [SCI.AAS.B.HS.4](#)

- 5b** Recognize the components necessary for plants to produce their own food and oxygen (e.g., water, sunlight, carbon dioxide). [SCI.AAS.B.HS.5B](#)

Ecosystems: Interactions, Energy, and Dynamics

- 6** Use models to recognize an organism, a population, and an ecosystem. [SCI.AAS.B.HS.6](#)

- 7** Identify living and nonliving components in an ecosystem. [SCI.AAS.B.HS.7](#)

- 8** Recognize the relationship between population size and available resources for food and shelter from a graphical representation. [SCI.AAS.B.HS.8](#)

- 9a** Use data to identify the impacts of humans on Alabama ecosystems. [SCI.AAS.B.HS.9A](#)

Heredity: Inheritance and Variation of Traits

- 11** Recognize that parents and offspring in a population may have different traits. [SCI.AAS.B.HS.11](#)

- 11b** Identify environmental conditions that impact the health of organisms. [SCI.AAS.B.HS.11B](#)

Unity and Diversity

- 13** Classify organisms into similar groups based on physical characteristics. [SCI.AAS.B.HS.13](#)

- 15** Identify how changes in the environment can lead to speciation or possible extinction. [SCI.AAS.B.HS.15](#)