

# 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](#)

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

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

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

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

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- 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](#)

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

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

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- 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](#)

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- 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](#)

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