

Science
Unit 2: Biomes

<p>Essential Understandings</p>	<ul style="list-style-type: none"> ▪ There are similarities and differences within and between biomes. ▪ Living things depend on one another and on non-living aspects of the environment.
<p>Essential Questions</p>	<ul style="list-style-type: none"> ▪ What is a biome? ▪ What are some living and non-living components in a given biome? ▪ How do living things depend on one another and on non-living aspects of the environment? ▪ What is the relationship between producers, consumers and decomposers in a biome?
<p>Essential Knowledge</p>	<ul style="list-style-type: none"> ▪ A biome is a complex community of plants and animals in a region. ▪ There is a variety of biomes on the earth. ▪ There are living and non-living components in biomes. ▪ Living things have specific life cycles, structures, and behaviors. ▪ There is a relationship between producers, consumers, and decomposers in a biome. ▪ Individual parts of organisms or ecosystems can influence one another. ▪ Adaptation is when a species changes over time in response to its environment.
<p>Vocabulary</p>	<ul style="list-style-type: none"> ▪ <u>Terms:</u> <ul style="list-style-type: none"> ○ biome, ecosystem, habitat, niche, organism, living, non-living, classify, physical characteristics, vertebrate, invertebrate, kingdom, diversity, interdependency, community, region, climate, precipitation, land forms, vernal pool ▪ <u>Biome:</u> <ul style="list-style-type: none"> ○ tundra (alpine (e.g., Mt. Katahdin), arctic), taiga, desert, forest (rain, tropical, temperate, deciduous, coniferous), grassland, marine (temperate, tropical), wetland ▪ <u>Food Web:</u> <ul style="list-style-type: none"> ○ predator, prey, producer, consumer, decomposer, diet ▪ <u>Organisms:</u> <ul style="list-style-type: none"> ○ life cycle (stages, reproduction), behavior (instinct, learned, migrate, hibernate/deep sleep), structure, adaptation

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<p align="center">Essential Skills</p>	<ul style="list-style-type: none"> ▪ Identify some living organisms in a biome. ▪ Identify the life cycle, behavior, and structure of various organisms in a biome. ▪ Compare and contrast organisms in biomes. ▪ Explain advantages and disadvantages gained when members of a species are different in their characteristics and behavior. ▪ Explain how changes in an organism’s habitat can influence its survival. ▪ Give examples that show how individual parts of organisms, ecosystems, or man-made structures can influence one another. ▪ Explain why it can be important for some members of a species to have different characteristics and behaviors.
<p align="center">Related Maine Learning Results</p>	<p><u>Science</u></p> <p>A. Unifying Themes A1. Systems Students apply the principles of systems, models, constancy and change, and scale in science and technology.</p> <p>a. Give examples that show how individual parts of organisms, ecosystems, or man-made structures can influence one another.</p> <p>E. The Living Environment E1. Biodiversity Students compare living things based on their behaviors, external features, and environmental needs.</p> <p>b. Describe the changes in external features and behaviors of an organism during its life cycle.</p> <p>E2. Ecosystems Students describe ways organisms depend upon, interact within, and change the living and non-living environment as well as ways the environment affects organisms.</p> <p>a. Explain how changes in an organism’s habitat can influence its survival.</p> <p>b. Describe that organisms all over the Earth are living, dying, and decaying and new organisms are being produced by the old ones.</p>

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<p>Related Maine Learning Results</p>	<p>E3.Cells Students describe how living things are made up of one or more cells and the ways cells help organisms meet their basic needs. a. Give examples of organisms that consist of a single cell and organisms that are made of a collection of cells. b. Compare how needs of living things are met in single-celled and multi-celled organisms.</p> <p>E5.Evolution Students describe the fossil evidence and present explanations that help up understand why there are differences among and between present and past organisms. a. Explain advantages and disadvantages gained when some individuals of the same kind are different in their characteristics and behavior.</p>
<p>Sample Lessons And Activities</p>	<ul style="list-style-type: none"> ▪ Draw and include organisms you would typically find in it. ▪ Research a biome and report your findings.
<p>Sample Classroom Assessment Methods</p>	<ul style="list-style-type: none"> ▪ List organisms you would find in a given biome and show interdependence. ▪ Compare two biomes showing similarities and differences.
<p>Sample Resources</p>	<ul style="list-style-type: none"> ▪ <u>Publications:</u> <ul style="list-style-type: none"> ○ <u>Deserts</u> – Peter Murray ○ <u>Grasslands</u> – Malcolm Penny ○ <u>Life in the Polar Lands</u> – Monica Byles ○ <u>Mountains</u> - Peter Murray ○ <u>Oceans</u> – John Woodward ○ <u>Rainforests</u> – Tony Allen ○ <u>Taiga</u> - Edward Ricciuti ○ <u>Temperate Forests</u> - John Woodward ○ <u>Wetlands</u> – Duncan Brewer ○ <u>What Is A Biome?</u> - Bobbie Kalman ▪ <u>Videos:</u> <ul style="list-style-type: none"> ○ <u>Wetland Biomes</u> ○ <u>Wetland Biomes: Essential and Endangered</u>