

Middle school (6th–8th) Mindfulness Lab

NGSS Standard Alignment List

Lesson Name	Standard Alignment
Lesson 1: Growing Green: The Science of Hydroponics and the Environment	MS-LS2-2: Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems. MS-ESS3-3: Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.
Lesson 2: Hydroponics Across Ages: A Look at its History, Current State, and Future	MS-LS2-5: Evaluate competing design solutions for maintaining biodiversity and ecosystem services. MS-ETS1-1: Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution.
Lesson 3: Becoming a Gardyn Master: Your Path to Success	MS-LS2-2: Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems. MS-ETS1-3: Analyze data from tests to determine similarities and differences among designed solutions.
Lesson 4a: Adapting to the Seasons: How to Adjust Your Crop Calendar in Your Starter Kit	MS-LS1-5: Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms. MS-ETS1-3: Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution.
Lesson 4b: Aligning with the Seasons: Discovering the Flexibility of Crop Calendars in Your Starter Kit	MS-ESS3-3: Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their impacts. MS-LS2-4: Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.
Lesson 5a: Fostering Nature: Exploring and Sustaining Your Gardyn	MS-LS1-5: "Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms."

	MS-ETS1-2: "Evaluate competing design solutions based on jointly developed and agreed-upon design criteria."
Lesson 5b: Fostering Nature: Caring and Maintaining Your Gardyn	MS-LS1-3: Construct and support an argument that plants and animals have internal and external structures that function to help them survive in their environment. MS-ETS1-1: Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution.
Lesson 6a: Welcome to Your Gardyn Oasis: A Nursery	MS-LS1-5: Conduct an investigation to determine how environmental conditions affect plant growth. MS-ESS3-3: Apply scientific principles to design a method for monitoring and minimizing human impact on the environment.
Lesson 6b: Welcome to Your Gardyn Oasis: Seed Banks & Seed Vaults	MS-LS2-5: Evaluate competing design solutions for maintaining biodiversity and ecosystem services. MS-LS2-3: Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.
Lesson 7a: Seed Central: Discovering Germination	MS-LS1-5: Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms. MS-LS1-3: Develop and use a model to describe the function of a cell as a whole and the ways parts of cells contribute to the function.
Lesson 7b: Seed Central: Exploring Germination: Understanding Rates & Climate Change	MS-LS1-4: Use digital tools to analyze a scientific problem. MS-ESS3-3: Analyze and interpret data on natural resources and human impacts on the environment.
Lesson 8: Agriculture in the Era of Climate Change: Adapting to New Realities	MS-ESS3-3: Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment. MS-LS2-5: Evaluate competing design solutions for maintaining biodiversity and ecosystem services.
Lesson 9a: Hydro-Hydration: How Water Systems Help Seedlings Grow with Kelby's Help!	MS-LS1-5: Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms. MS-ESS3-3: Apply scientific principles to design a method for monitoring and minimizing human impact on the environment.
Lesson 9b: Hydro-Hydration: How Water Systems Help Seedlings Grow with Kelby's Help! As a solution to Eutrophication	MS-LS2-4: Analyze the effects of resource availability on organisms and populations in an ecosystem. MS-ESS3-3: Apply scientific principles to design a method for monitoring and minimizing human impact on the environment.

Lesson 10: Discovering the Botanical Life Cycle	<p>MS-LS1-5: Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.</p> <p>MS-LS1-4: Use a model to describe how animals and plants interact with the environment to obtain matter and energy.</p>
Lesson 11a: Unpacking the Story of Nutrients: Plant Nutrients & Conditioning Factors	<p>MS-LS1-6: Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.</p> <p>MS-ESS3-1: Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geological processes.</p>
Lesson 11b: Unpacking the Story of Nutrients: Exploring Heat Energy on Plant Growth	<p>MS-ESS2-4: Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.</p> <p>MS-LS1-5: Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.</p>
Lesson 12: From Farm to Table: Following the Journey of Your Food	<p>MS-LS2-5: Evaluate competing design solutions for maintaining biodiversity and ecosystem services.</p> <p>MS-ESS3-3: Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.</p>
Lesson 13: Plant Anatomy and Pruning Tips	<p>MS-LS1-1: Structure and function of living organisms.</p> <p>MS-LS1-5: Photosynthesis and cellular respiration in organisms.</p>
Lesson 14a: Managing Pests and Diseases Naturally: Finding Balance	<p>MS-LS2-3: Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.</p> <p>MS-LS2-5: Evaluate competing design solutions for maintaining biodiversity and ecosystem services.</p>
Lesson 14b: Managing Pests and Diseases Naturally: Natural vs Chemical Pesticides	<p>MS-LS2-4: Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.</p> <p>MS-ESS3-3: Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.</p>
Lesson 15: Growing Wellness: Getting Ready for a Mindful Harvest	<p>MS-LS2-5: Evaluate competing design solutions for maintaining biodiversity and ecosystem services.</p> <p>MS-ESS3-3: Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.</p>
Lesson 16a: Enjoying the Rewards: The Excitement of Harvesting	<p>MS-LS1-3: Develop and use a model to describe the function of a cell as a whole and the ways parts of cells contribute to the function.</p>

	MS-ESS3-4: Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.
Lesson 16b: Enjoying the Rewards: Beyond the Harvest Time	MS-LS2-4: Use mathematical representations to describe and support claims for the physical interactions between and among organisms in an ecosystem. MS-LS2-2: Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.