



# LABS ON THE GO

## K - 2nd Grade Labs on the Go

Package	Name of Lab	Description	TEKS
Force & Motion	Coasting Coasters	Students will explore the forces of gravity and friction while creating a rollercoaster. They will compare how far different objects travel on their marble run and how hills affect the speed and distance traveled.	K.1A, K.1B, K.2B, K.2C, K.2D, K.2E, K.3A, K.3B, K.4A, K.4B, K.5A, K.6C, K.6D, 1.1A, 1.1B, 1.2B, 1.2C, 1.2D, 1.2E, 1.3A, 1.4A, 1.4B, 1.5A, 1.5C, 1.6C, 2.1A, 2.1B, 2.2B, 2.2C, 2.2D, 2.2E, 2.3A, 2.3B, 2.4A, 2.4B, 2.5A, 2.5C, 2.5D, 2.6C
Environmental Science	Creature Connections	Students will learn about how energy is transferred from the sun to all levels of the food chain. They will explore the differences between herbivores, carnivores, and omnivores, discuss what different organisms eat, and construct a food chain using the information they learn. Finally, they will unpack the impact human activity can have on a food chain.	<b>Science TEKS:</b> K.1B, K.2A, K.2B, K.2E, K.3C, K.4B, K.10A, K.10B, K.9B, 1.1B, 1.2A, 1.2B, 1.3C, 1.9C, 1.10A, 2.1B, 2.2A, 2.2B, 2.2E, 2.2F, 2.3C, 2.9A, 2.9B, 2.9C, 2.10A <b>Math TEKS:</b> K.1A, K.2A, K.2C, K.2F, K.2G, .6A, K.6F, K.8A, 1.1A, 1.2A, 1.2G, 1.5B, 1.8A, 2.1A, 2.2D
Life Science	Gettin' Buggy	In this activity, students will learn how scientists classify living things. They will observe and classify a set of specimen blocks in different ways. Students will then use knowledge gained & critical thinking to make their own classification criteria, sort their specimens and then graph their data.	K.1A, K.2A, K.2B, K.2C, K.2D, K.2E, K.3C, K.4B, K.5A, K.10A, K.10B, 1.1A, 1.2A, 1.2B, 1.2C, 1.2D, 1.2E, 1.3C, 1.4B, 1.5A, 1.10A, 2.1A, 2.2A, 2.2B, 2.2C, 2.2D, 2.2E, 2.2F, 2.3C, 2.4B, 2.10A

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# LABS ON THE GO

## 3rd - 5th Grade Labs on the Go

Package	Name of Lab	Description	TEKS
Force & Motion	Zip Away	Students will craft a carrier for their zip line, make improvements to their design and complete challenges at varying slopes to investigate forces, movement and speed. Students will actively apply the Engineering Design Process to a fun engineering design challenge.	3.1A, 3.1B, 3.2A, 3.2C, 3.2D, 3.2E, 3.2F, 3.3C, 3.6B, 3.6C, 4.1A, 4.1B, 4.2A, 4.2C, 4.2D, 4.2F, 4.2E, 4.3C, 4.6D, 5.1A, 5.1B, 5.2A, 5.2B, 5.2C, 5.2D, 5.4F, 5.2E, 5.3C, 5.6D
	Marble Rollercoaster	Students work in small groups to build a roller coaster with at least one loop and one jump, demonstrating how potential energy transforms into kinetic energy. Students observe the relationship of height to potential energy and the resulting gravitational kinetic energy.	3.1A, 3.1B, 3.2A, 3.2B, 3.2D, 3.2F, 3.2E, 3.3A, 3.3C, 3.6B, 3.6C, 4.1A, 4.1B, 4.2A, 4.2B, 4.2D, 4.2F, 4.2E, 4.3A, 4.3C, 4.6D, 5.1A, 5.1B, 5.2A, 5.2B, 5.2C, 5.2D, 5.2F, 5.2E, 5.3A, 5.3C, 5.6D
Environmental Science	Webs of Mystery	Students will learn about how energy is transferred from the sun to all levels of the food chain and throughout the food web. They will explore concepts of primary production, consumption (herbivore, carnivore levels), decomposition and the flow of energy through the web. Deductive reasoning skills will be used to solve a mystery surrounding these subjects, in a specific ecosystem. How changes to the food web can affect the health of an ecosystem will also be discussed.	3.1A, 3.1B, 3.2A, 3.2B, 3.2D, 3.2F, 3.3C, 3.9A, 3.9B, 3.9C, 4.1A, 4.1B, 4.2A, 4.2B, 4.2D, 4.2F, 4.3A, 4.3C, 4.9A, 4.9B, 5.1A, 5.1B, 5.2A, 5.2B, 5.2D, 5.2F, 5.3A, 5.3C, 5.9A, 5.9B, 5.9C
Life Science	Under the Lens	Students will explore the structures and functions of organisms by observing live organisms and bug blocks under a microscope to determine how different structures and functions help them survive in a particular environment.	3.1A, 3.2A, 3.2B, 3.2D, 3.2F, 3.3C, 3.10A, 3.4, 4.1A, 4.2B, 4.2C, 4.3A, 4.4, 4.10A, 5.1A, 5.2A, 5.2B, 5.2D, 5.2F, 5.3A, 5.4, 5.9A, 5.10A, 5.10B

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# LABS ON THE GO

## 6th - 8th Grade Labs on the Go

Package	Name of Lab	Description	TEKS
Force & Motion	Roller Coaster Tycoon	Students will explore concepts of gravity, friction, and speed while they design a roller coaster prototype. They will test how different material types for their coaster cars affect these physical forces. They will utilize the engineering design process to improve on their design using what they discover. They will also learn about STEM careers such as structural, industrial and roller coaster engineering.	6.2A, 6.2B, 6.2C, 6.2D, 6.2E, 6.3D, 6.8A, 6.8B, 6.8C, 7.1A, 7.1B, 7.2A, 7.2B, 7.2C, 7.2D, 7.2E, 7.3D, 8.1A, 8.1B, 8.2A, 8.2B, 8.2C, 8.2D, 8.2E, 8.3D, 8.6A, 8.6B
Environmental Science	Water Investigations	Students will explore concepts of watersheds and water quality. They will test water samples using physical, chemical, and biological methods. They will investigate a water-based mystery, based in a fictional community, using clues from various community publications, plus their water testing results to solve the case. Students will learn about STEM careers such as ecology, biochemistry, and entomology.	6.1A, 6.1B, 6.2A, 6.2C, 6.2E, 6.3A, 6.4A, 6.4B, 7.1A, 7.1B, 7.2A, 7.2C, 7.2E, 7.3A, 7.4A, 7.4B, 7.8C, 7.10A, 8.1A, 8.1B, 8.2A, 8.2C, 8.2E, 8.3A, 8.4A, 8.4B
Life Science	Bug-Inspired Biomimicry	Students will explore the concept of adaptation, structure and function with insects and other arthropods. They will learn about biomimicry, or how scientists study structures and adaptations to use in our own technology. Students will utilize scientific tools like microscopy and apply what they discover to design a blueprint of a biomimicry-based device. Students will also learn about STEM careers such as biology, entomology, and biomimicry engineering.	6.1A, 6.4B, 6.1B, 6.2A, 6.2C, 6.2E, 6.3D, 6.4A, 7.1A, 7.4B, 7.1B, 7.2A, 7.2C, 7.2E, 7.3D, 7.4A, 7.11A, 8.1A, 8.4B, 8.1B, 8.2A, 8.2C, 8.2E, 8.3D, 8.4A

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