



# PLTW Launch Standards Guide

Mississippi College and Career Readiness  
Standards for Science K-5



PLTW Launch (PreK-5) is designed to support your learning needs. The modules are developed to ensure an unmatched experience, combining three-dimensional learning; unique, problem-based instructional approach; real-world applied learning; as well as Spanish language options – all in one program.

This Standards Guide shows how each PLTW Launch module supports the Mississippi College and Career Readiness Standards for Science K-5. Because schools need the flexibility to implement the curriculum in the way that best meets their students' needs, PLTW Launch is designed to support a wide range of implementations. Whether the modules are offered in all classrooms, as a specials rotation, as grade level rotations, as an after-school program, or even as a summer learning implementation, PLTW Launch offers the flexibility to meet your needs.

Use this Standards Guide in combination with the [Module Descriptions PDF](#) as planning tools to explore how you can implement PLTW Launch as your elementary learning solution.





		Performance Expectation	PLTW Launch Modules
Life Science	L.K.1 Hierarchical Organization	L.K.1A Students will demonstrate an understanding of living and nonliving things.	Life Science: Living and Nonliving Things (PreK) Living Things: Needs and Impacts (K)
		L.K.1B Students will demonstrate an understanding of how animals (including humans) use their physical features and their senses to learn about their environment.	Life Science: Living and Nonliving Things (PreK) Animal Adaptations (1)
	L.K.2 Reproduction and Heredity	L.K.2 Students will demonstrate an understanding of how living things change in form as they go through the general stages of a life cycle.	This standard is not currently supported.
	L.K.3 Ecology and Interdependence	L.K.3A Students will demonstrate and understanding of what animals and plants need to live and grow.	Living Things: Needs and Impacts (K)
		L.K.3B Students will demonstrate an understanding of the interdependence of living things and the environment in which they live.	Living Things: Needs and Impacts (K)
	L.K.4 Adaptations and Diversity	L.K.4 Students will demonstrate an understanding that some groups of plants and animals are no longer living (extinct) because they were unable to meet their needs for survival.	This standard is not currently supported.
Physical Science	P.K.5 Organization of Matter and Chemical Interactions	P.K.5A Students will demonstrate an understanding of the solid and liquid states of matter.	Matter: Floating and Sinking (PreK)
		P.K.5B Students will demonstrate an understanding of how solid objects can be constructed from a smaller set.	Matter: Floating and Sinking (PreK)
Earth and Space Science	E.K.8 Earth and the Universe	E.K.8A Students will demonstrate an understanding of the pattern of seasonal changes on the Earth.	Sunlight and Weather (K)
		E.K.8B Students will demonstrate an understanding that the Sun provides the Earth with heat and light.	Sunlight and Weather (K)
	E.K.10 Earth's Resources	E.K.10 Students will demonstrate an understanding of how humans use Earth's resources.	Living Things: Needs and Impacts (K)

	Standard	Performance Expectation	PLTW Launch Modules
Life Science	L.1.1 Hierarchical Organization	L.1.1 Students will demonstrate an understanding of the basic needs and structures of plants.	Designs Inspired by Nature (1) Living Things: Needs and Impacts (K) Living Things: Diversity of Life (2) Materials Science: Form and Function (2)
	L.1.2 Reproduction and Heredity	L.1.2 Students will demonstrate an understanding of how living things change in form as they go through the general stages of a life cycle.	This standard is not currently supported.
	L.1.3 Ecology and Interdependence	L.1.3A Students will demonstrate an understanding of what plants need from the environment for growth and repair.	Living Things: Diversity of Life (2)
		L.1.3B Students will demonstrate an understanding of the interdependence of flowering plants and pollinating insects.	Materials Science: Form and Function (2)
	L.1.4 Adaptations and Diversity	L.1.4 Students will demonstrate an understanding of the ways plants adapt to their environment in order to survive.	This standard is not currently supported.
Physical Science	P.1.6 Motions, Forces, and Energy	P.1.6A Students will demonstrate an understanding that light is required to make objects visible.	Light and Sound (1)
		P.1.6B Students will demonstrate an understanding of sound.	Light and Sound (1)
Earth and Space Science	E.1.9 Earth's Systems and Cycles	E.1.9A Students will demonstrate an understanding of the patterns of weather by describing, recording, and analyzing weather data to answer questions about daily and seasonal weather patterns.	Sunlight and Weather (K)
		E.1.9B Students will demonstrate an understanding of models (drawings or maps) to describe how water and land are distributed on Earth.	The Changing Earth (2)
	E.1.10 Earth's Resources	E.1.10 Students will demonstrate an understanding of human dependence on clean and renewable water resources.	This standard is not currently supported.

	Standard	Performance Expectation	PLTW Launch Modules
Life Science	L.2.1 Hierarchical Organization	L.2.1 Students will demonstrate an understanding of the classification of animals based on physical characteristics.	This standard is not currently supported.
	L.2.2 Reproduction and Heredity	L.2.2 Students will demonstrate an understanding of how living things change in form as they go through the general stages of a life cycle.	Life Cycles and Survival (3)
	L.2.3 Ecology and Interdependence	L.2.3A Students will demonstrate an understanding of the interdependence of living things and the environment in which they live.	Living Things: Diversity of Life (2) Life Cycles and Survival (3)
		L.2.3B Students will demonstrate an understanding of the interdependence of living things.	Living Things: Diversity of Life (2) Life Cycles and Survival (3)
	L.2.4 Adaptations and Diversity	L.2.4 Students will demonstrate an understanding of the ways animals adapt to their environment in order to survive.	Animal Adaptations (1) Environmental Changes (3)
Physical Science	P.2.5 Organization of Matter and Chemical Interactions	P.2.5 Students will demonstrate an understanding of the properties of matter.	Materials Science: Properties of Matter (2)
	P.2.6 Motions, Forces, and Energy	P.2.6 Students will demonstrate an understanding of how the motion of objects is affected by pushes, pulls, and friction on an object.	Stability and Motion: Science of Flight (3) Stability and Motion: Forces and Interactions (3)
Earth and Space Science	E.2.8 Earth and the Universe	E.2.8 Students will demonstrate an understanding of the appearance, movements, and patterns of the sun, moon, and stars.	Light: Observing the Sun, Moon, and Stars (1)
	E.2.10 Earth's Resources	E.2.10 Students will demonstrate an understanding of how humans use Earth's resources.	Materials Science: Form and Function (2) Life Cycles and Survival (3)



	Standard	Performance Expectation	PLTW Launch Modules
Life Science	L.3.1 Hierarchical Organization	L.3.1 Students will demonstrate an understanding of internal and external structures in plants and animals and how they relate to their growth, survival, behavior, and reproduction within an environment.	Environmental Changes (3) Materials Science: Form and Function (2) Organisms: Structure and Function (4)
	L.3.2 Reproduction and Heredity	L.3.2 Students will demonstrate an understanding that through reproduction, the survival and physical features of plants and animals are inherited traits from parent organisms but can also be influenced by the environment.	Variation of Traits (3)
	L.3.4 Adaptations and Diversity	L.3.4 Students will demonstrate an understanding of how adaptations allow animals to satisfy life needs and respond both physically and behaviorally to their environment.	Environmental Changes (3) Variation of Traits (3) Life Cycles and Survival (3)
Physical Science	P.3.5 Organization of Matter and Chemical Interactions	P.3.5 Students will demonstrate an understanding of the physical properties of matter to explain why matter can change states between a solid, liquid, or gas dependent upon the addition or removal of heat.	Materials Science: Properties of Matter (2)
	P.3.6 Motions, Forces, and Energy	P.3.6 Students will demonstrate an understanding of magnets and the effects of pushes, pulls, and friction on the motion of objects.	Stability and Motion: Forces and Interactions (3)
Earth and Space Science	E.3.7 Earth's Structure and History	E.3.7A Students will demonstrate an understanding of the various processes involved in the rock cycle, superposition of rock layers, and fossil formation.	Earth: Past, Present, and Future (4) Environmental Changes (3)
		E.3.7B Students will demonstrate an understanding of the composition of Earth and the processes which change Earth's landforms.	Earth: Past, Present, and Future (4) Earth: Human Impact and Natural Disasters (4) The Changing Earth (2) Environmental Changes (3)
	E.3.9 Earth's Systems and Cycles	E.3.9 Students will demonstrate an understanding of how the Earth's systems (i.e., geosphere, hydrosphere, atmosphere, and biosphere) interact in multiple ways to affect Earth's surface materials and processes.	This standard is not currently supported.
	E.3.10 Earth's Resources	E.3.10 Students will demonstrate an understanding that all materials, energy, and fuels that humans use are derived from natural sources.	Earth: Human Impact and Natural Disasters (4)

	Standard	Performance Expectation	PLTW Launch Modules
Life Science	L.4.1 Hierarchical Organization	L.4.1 Students will demonstrate an understanding of the organization, functions, and interconnections of the major human body systems.	Organisms: Structure and Function (4)
	L.4.2 Reproduction and Heredity	L.4.2 Students will demonstrate an understanding of life cycles, including familiar plants and animals (e.g., reptiles, amphibians, or birds).	Life Cycles and Survival (3)
Physical Science	P.4.6 Motions, Forces, and Energy	P.4.6A Students will demonstrate an understanding of the common sources and uses of heat and electric energy and the materials used to transfer heat and electricity.	Energy Exploration (4)
		P.4.6B Students will demonstrate an understanding of the properties of light as forms of energy.	Waves and the Properties of Light (4)
		P.4.6C Students will demonstrate an understanding of the properties of sound as a form of energy.	Waves and the Properties of Light (4)
Earth and Space Science	E.4.9 Earth's Systems and Cycles	E.4.9A Students will demonstrate an understanding of how the water cycle is propelled by the sun's energy.	Earth's Water and Interconnected Systems (5)
		E.4.9B Students will demonstrate an understanding of weather and climate patterns.	Weather: Factors and Hazards (3)
		E.4.9C Students will demonstrate an understanding of how natural processes and human activities affect the features of Earth's landforms and oceans.	Earth: Human Impact and Natural Disasters (4) Earth's Water and Interconnected Systems (5)
	E.4.10 Earth's Resources	E.4.10 Students will demonstrate an understanding of the various sources of energy used for human needs along with their effectiveness and possible impacts.	Energy Exploration (4)

	Standard	Performance Expectation	PLTW Launch Modules
Life Science	L.5.3 Ecology and Interdependence	.5.3A Students will demonstrate an understanding of photosynthesis and the transfer of energy from the sun into chemical energy necessary for plant growth and survival.	Ecosystems: Flow of Matter and Energy (5)
		L.5.3B Students will demonstrate an understanding of a healthy ecosystem with a stable web of life and the roles of living things within a food chain and/or food web, including producers, primary and secondary consumers, and decomposers.	Ecosystems: Flow of Matter and Energy (5)
	P.5.5 Organization of Matter and Chemical Interactions	P.5.5A Students will demonstrate an understanding of the physical properties of matter.	Matter: Properties and Reactions (5)
		P.5.5B Students will demonstrate an understanding of mixtures and solutions.	Matter: Properties and Reactions (5)
		P.5.5C Students will demonstrate an understanding of the difference between physical and chemical changes.	Matter: Properties and Reactions (5)
	P.5.6 Motions, Forces, and Energy	P.5.6 Students will demonstrate an understanding of the factors that affect the motion of an object through a study of Newton’s Laws of Motion.	Energy Exploration (4)
	E.5.8 Earth and the Universe	E.5.8A Students will demonstrate an understanding of the locations of objects in the universe.	Patterns in the Universe (5)
		E.5.8B Students will demonstrate an understanding of the principles that govern moon phases, day and night, appearance of objects in the sky, and seasonal changes.	Patterns in the Universe (5)
	E.5.10 Earth’s Resources	E.5.10 Students will demonstrate an understanding of the effects of human interaction with Earth and how Earth’s natural resources can be protected and conserved.	Earth’s Water and Interconnected Systems (5) Earth: Human Impact and Natural Disasters (4)