



# PLTW Launch Standards Guide

Science Standards of Learning for Virginia  
Public Schools (K-5)



PLTW Launch (PreK-5) is designed to support your science 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 Science Standards of Learning for Virginia Public Schools (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.

The module charts below provide a single-grade, up or down shift in the grade level recommendations to support the range of school needs across the country.

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.





		Standards	PLTW Launch Modules
Force, Motion, and Energy	K.2	The student will investigate and understand that pushes and pulls affect the motion of objects.	Pushes and Pulls (K)
Matter	K.3	The student will investigate and understand that physical properties of an object can be described.	Structure and Function: Exploring Design (K)
	K.4	The student will investigate and understand that water is important in our daily lives and has properties.	Life Science: Living and Nonliving Things (PreK) Matter: Floating and Sinking (PreK)
Living Systems and Processes	K.5	The students will investigate and understand that senses allow humans to seek, find, take in, and react or respond to different information.	Life Science: Living and Nonliving Things (PreK)
	K.6	The student will investigate and understand that there are differences between living organisms and nonliving objects.	Living Things: Needs and Impacts (K)
	K.7	The student will investigate and understand that plants and animals have basic needs and life processes.	Living Things: Needs and Impacts (K) Designs Inspired by Nature (1)
Earth and Space Systems	K.8	The student will investigate and understand that light influences temperature on Earth's surfaces and can cause shadows.	Sunlight and Weather (K)
	K.9	The student will investigate and understand that there are patterns in nature.	Sunlight and Weather (K)
	K.10	The student will investigate and understand that change occurs over time.	Standard not currently supported
Earth Resources	K.11	The student will investigate and understand that humans use resources.	Living Things: Needs and Impacts (K)

		Standards	PLTW Launch Modules
Force, Motion, and Energy	1.2	The student will investigate and understand that objects can move in different ways.	Light and Sound (1)
Matter	1.3	The student will investigate and understand that objects are made from materials that can be described by their physical properties.	Light and Sound (1) Materials Science: Properties of Matter (2)
Living Systems and Processes	1.4	The student will investigate and understand that plants have basic life needs and functional parts that allow them to survive.	Living Things: Diversity of Life (2)
	1.5	The student will investigate and understand that animals, including humans, have basic life needs that allow them to survive.	Living Things: Needs and Impacts (K) Animal Adaptations (1)
Earth and Space Systems	1.6	The student will investigate and understand that there is a relationship between the sun and Earth.	Sunlight and Weather (K) Light: Observing the Sun, Moon and Stars (1)
	1.7	The student will investigate and understand that there are weather and seasonal changes.	Sunlight and Weather (K)
Earth Resources	1.8	The student will investigate and understand that natural resources can be used responsibly. Key ideas include  a) most natural resources are limited;  b) human actions can affect the availability of natural resources; and  c) reducing, reusing, and recycling are ways to conserve natural resources.	Living Things: Needs and Impacts (K)

		Standards	PLTW Launch Modules
Force, Motion, and Energy	2.2	The student will investigate and understand that different types of forces may cause an object's motion to change.	Stability and Motion: Forces and Interactions (3)
Matter	2.3	The student will investigate and understand that matter can exist in different phases.	Materials Science: Properties of Matter (2)
Living Systems and Processes	2.4	The student will investigate and understand that plants and animals undergo a series of orderly changes as they grow and develop.	Living Things: Diversity of Life (2)
	2.5	The student will investigate and understand that living things are part of a system.	Living Things: Diversity of Life (2)
Earth and Space Systems	2.6	The student will investigate and understand that there are different types of weather on Earth	Weather: Factors and Hazards (3)
	2.7	The student will investigate and understand that weather patterns and seasonal changes affect plants, animals, and their surroundings.	The Changing Earth (2)
Earth Resources	2.8	The student will investigate and understand that plants are important natural resources.	Living Things: Diversity of Life (2) The Changing Earth (2)



## Third Grade

		Standards	PLTW Launch Modules
Force, Motion, and Energy	3.2	The student will investigate and understand that the direction and size of force affects the motion of an object.	Stability and Motion: Forces and Interactions (3)
Matter	3.3	The student will investigate and understand how materials interact with water.	Weather: Factors and Hazards (3)
Living Systems and Processes	3.4	The student will investigate and understand that adaptations allow organisms to satisfy life needs and respond to the environment.	Life Cycles and Survival (3) Environmental Changes (3)
	3.5	The student will investigate and understand that aquatic and terrestrial ecosystems support a diversity of organisms.	Living Things: Diversity of Life (2)
Earth and Space Systems	3.6	The student will investigate and understand that soil is important in ecosystems.	Standard not currently supported
	3.7	The student will investigate and understand that there is a water cycle and water is important to life on Earth.	Standard not currently supported
Earth Resources	3.8	The student will investigate and understand that natural events and humans influence ecosystems.	Environmental Changes (3) Weather: Factors and Hazards (3) Earth: Human Impact and Natural Disasters (4)

		Standards	PLTW Launch Modules
Living Systems and Processes	4.2	The student will investigate and understand that plants and animals have structures that distinguish them from one another and play vital roles in their ability to survive.	Organisms: Structure and Function (4)
	4.3	The student will investigate and understand that organisms, including humans, interact with one another and with the nonliving components in the ecosystem.	Life Cycles and Survival (3) Earth: Human Impact and Natural Disasters (4) Ecosystems: Flow of Matter and Energy (5)
Earth and Space Systems	4.4	The student will investigate and understand that weather conditions and phenomena affect ecosystems and can be predicted.	Weather: Factors and Hazards (4) Earth: Human Impact and Natural Disasters (4)
	4.5	The student will investigate and understand that the planets have characteristics and a specific place in the solar system.	Patterns in the Universe (5)
	4.6	The student will investigate and understand that there are relationships among Earth, the moon, and the sun.	Patterns in the Universe (5)
	4.7	The student will investigate and understand that the ocean environment has characteristics.	Environmental Changes (3)
Earth Resources	4.8	The student will investigate and understand that Virginia has important natural resources.	Standard not currently supported

		Standards	PLTW Launch Modules
Force, Motion, and Energy	5.2	The student will investigate and understand that energy can take many forms.	Energy Exploration (4)
	5.3	The student will investigate and understand that there is a relationship between force and energy of moving objects.	Energy Exploration (4)
	5.4	The student will investigate and understand that electricity is transmitted and used in daily life.	Energy Exploration (4)
	5.5	The student will investigate and understand that sound can be produced and transmitted.	Waves and the Properties of Light (4)
	5.6	The student will investigate and understand that visible light has certain characteristics and behaves in predictable ways.	Waves and the Properties of Light (4)
Matter	5.7	The student will investigate and understand that matter has properties and interactions.	Matter: Properties and Reactions (5)
Earth and Space Systems	5.8	The student will investigate and understand that Earth constantly changes.v	Earth: Past, Present, and Future (4)
Earth Resources	5.9	The student will investigate and understand that the conservation of energy resources is important.	Energy Exploration (4) Earth: Human Impact and Natural Disasters (4)