



PLTW Launch Modules Overview

Tennessee Computer Science Standards (K-5)

This Module Overview highlights the PLTW Launch Modules with the most connections to Computer Science through the TN Computer Science Standards.

All PLTW Launch Modules contain connections to this body of standards, and more detail on all modules can be found in the PLTW Launch Standards guide for TN Computer Science Standards.

PLTW Launch Modules have been thoughtfully connected to TN standards for Tennessee educators. Each grade level has been assigned the PLTW Launch Modules that are the “best-fit” for the Tennessee Academic Standards for Science; for consistency, the same modules are used in this guide. When grade level suggestions vary from the intended grade level it is shown like this: *Variation of Traits (3)* to indicate that the module was originally developed for use in 3rd Grade.

Tennessee educators also have the flexibility to utilize the PLTW Launch Modules in the grade level that works best for their students.








PLTW
Computer Science




PLTW
Engineering

 **PLTW**

LAUNCH Tennessee K-5 Modules Overview

	Physical Science 		Life Science 		Earth and Space Science 		Engineering 	Computer Science 		
K	Structure and Function: Exploring Design	Matter: Floating and Sinking (PK)	Life Science: Living and Nonliving Things (PK)			Sunlight and Weather	Living Things: Needs and impacts	Pushes and Pulls	Structure and Function: Human Body	Animals and Algorithms
1	Light and Sound		Designs Inspired by Nature			Light: Observing the Sun, Moon, and Stars				Animated Storytelling
2			Animal Adaptations (1)	Living Things: Diversity of Life	Variation of Traits (3)	The Changing Earth		Materials Science: Form and Function		Grids and Games
3	Materials Science: Properties of Matter (2)	Stability and Motion: Forces and Interactions	Environmental Changes	Life Cycles and Survival		Weather: Factors and Hazards		Stability and Motion: Science of Flight		Programming Patterns
4	Energy Exploration	Waves and the Properties of Light	Ecosystems: Flow of Matter and Energy (5)	Organisms: Structure and Function		Earth: Past, Present, and Future	Earth: Human Impact and Natural Disasters	Input/Output: Human Brain		Input/Output: Computer Systems
5	Matter: Properties and Reactions	Earth’s Water and Interconnected Systems				Patterns in the Universe		Robotics and Automation:		Robotics and Automation: Challenge
								Infection: Detection		Infection: Modeling and Simulation

		Essential Questions	TN Computer Science Standards	
K	Animals and Algorithms	How do you use algorithms in your daily life? How can you use computer programming to complete a task? How can a step-by-step process help you design or improve a solution to a problem?	K.FC.2 K.AT.1 K.NI.1	
1	Animated Storytelling	In what ways can stories be told using different tools? How does technology impact our lives? How can collaboration help you design or improve a solution to a problem?	1.FC.2 1.AT.1 1.AT.2	1.AT.3 1.DA.1 1.NI.1
2	Grids and Games	How can learning from others help you design or improve a solution to a problem? In what ways can computer science impact our lives?	2.FC.2 2.FC.3 2.FC.4 2.AT.1	2.AT.2 2.NI.1 2.IC.1
3	Programming Patterns	How does technology impact our lives? How can a step-by-step process help you design or improve a solution to a problem?	3.FC.2 3.FC.3 3.AT.1 3.AT.2	3.AT.3 3.PC.1 3.PC.2
4	Input/Output: Computer Systems	How does technology impact our lives? In what ways do computing systems work together to accomplish tasks? How can a step-by-step process help you design or improve a solution to a problem?	4.FC.1 4.FC.2 4.FC.3 4.AT.1	4.AT.2 4.DA.1 4.DA.2 4.PC.1
5	Robotics and Automation: Challenge	How can autonomous robots be used to help people? How can a step-by-step process help you design or improve a solution to a problem?	5.AT.1 5.AT.2 5.AT.3	5.PC.1 5.PC.2
	Infection: Modeling and Simulation	How do computer models and simulations help us make sense of scientific phenomena? In what ways can computer models and simulations be used to predict outcomes? How can a step-by-step process help you design or improve a solution to a problem?	5.FC.1 4.AT.1 5.AT.2 5.AT.3 5.DA.1	5.DA.2 5.NI.1 5.NI.2 5.PC.1 5.PC.2