PLTW Launch Modules Overview K-5

Computer Science

IL Computer Science Standards

PLTW Launch Modules integrate Science, Engineering, Computer Science, ELA, and Math. This Module Overview highlights the PLTW Launch Modules that focus on Computer Science and provide the greatest number of connections to the IL Computer Science Standards. All modules contain connections to this body of standards; more detail on all modules can be found in the PLTW Launch Standards Guide for IL Computer Science.

PLTW COMPUTER SCIENCE

PLTW ENGINEERING

Please note: The information included in this document is subject to change. As with all course materials, we will continue to update as more information becomes available.

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LAUNCH K-5 Modules Overview

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

PLTW LAUNCH Computer Science		Essential Questions	IL 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-2.CS.01 K-2.AP.09 → 12	K-2.AP.14, 15 K-2.AP.17, 18
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?	K-2.CS.01 → 03 K-2.NI.04 K-2.DA.05	1A-AP.08 → 15 1A-IC.16 → 18
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?	K-2.CS.01 → 03 K-2.NI.04 K-2.DA.05	K-2.AP.09 → 15 K-2.IC.16 → 18
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?	3-5.CS.02, 03 3-5.NI.05 3-5.AP.08	3-5.AP.10, 11 3-5.AP.13 3-5.AP.15 → 17
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?	3-5.CS.01 → 03 3-5.NI.04, 05 3-5.DA.06, 07	3-5.AP.08 → 17 3-5.AP.19, 20
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?	3-5.CS.01, 03 3-5.NI.05 3-5.AP.08, 10 → 13	3-5.AP.15, 17 3-5.IC.18 3-5.ET.B
	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?	3-5.CS.03 3-5.NI.05 3-5.DA.06, 07	3-5.AP.08 → 17 3-5.IC.20