PLTW Launch Standards Guide

Tennessee K-5 Computer Science State Standards



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 Guides shows how each PLTW Launch module supports the Tennessee K - 5 Computer Science State Standards. 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 <u>Module Descriptions</u> <u>PDF</u> as planning tools to explore how you can implement PLTW Launch as your elementary learning solution.





Core Concept	Standard	PLTW Launch Modules
K.FC: Foundational Concepts	1) Locate letters and numbers on the keyboard.	Standard not currently supported
	2) Ask questions to conduct investigations, solve problems, and test solutions.	Animals and Algorithms (K), Animated Storytelling (1)
K.AT: Algorithmic Thinking	1) Construct sequential events step-by-step in a logical order.	Animals and Algorithms (K), Animated Storytelling (1)
K.DA: Data Analysis	1) Collect and organize data.	Animated Storytelling (1)
K.NI: Networking and the Internet	1) Demonstrate age- appropriate methods for keeping personal information private.	Animals and Algorithms (K), Animated Storytelling (1)





Core Concept	Standard	
1.FC: Foundational Concepts	1) Navigate to applications and documents by using desktop icons, windows, and menus (e.g., open and close the browser window, find/use bookmark to store the website, recognize and use app on tablet).	Animals and Algorithms (K)
	2) Demonstrate use of input devices (e.g., mouse, keyboard).	Standard not currently sup
nking	1) Identify and revise problem-solving strategies to solve a simple problem.	Animals and Algorithms (K)
lgorithmic Th	2) Classify and sort information into logical order with and/or without a computer.	Animated Storytelling (1), G
1.AT: AI	3) Utilize digital tools to illustrate potential solutions to a problem.	Animals and Algorithms (K)
1.DA: Data Analysis	1) Interpret data displayed in a chart.	Animated Storytelling (1)
	2) Organize data using similarities and differences.	Animated Storytelling (1)
1.NI: Networking and the Internet	1) Advocate, demonstrate, and routinely practice safe, legal, and responsible use of information and technology.	Animals and Algorithms (K)



PLTW Launch Modules

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Grids and Games (2)

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Core Concept	Standard	1
2.FC: Foundational Concepts	1) Use the menu and tool bar to navigate editing functions.	Standard not currently s
	2) Use a variety of digital tools collaboratively to connect with other learners.	Standard not currently s
	3) Ask questions to conduct investigations, solve problems, and test solutions.	Animated Storytelling (1
	4) Select technology or tools to solve a problem or design a solution.	Animated Storytelling (1
2.AT: Algorithmic Thinking	1) Plan and create a design document to illustrate thoughts, ideas, and stories in a sequential (step-by-step) manner (e.g., story map, storyboard, sequential graphic organizer).	Animated Storytelling (1
	2) Compare and evaluate multiple ways to get a solution.	Animated Storytelling (1
	3) Categorize a group of items based on the attributes of actions of each item, with or without a computing device.	Animated Storytelling (1
2.DA: Data Analysis	1) Use data to make decisions, identify solutions, or determine relationships.	Animated Storytelling ((3)
	2) Use if/then reasoning to understand relationships with data.	Animated Storytelling ((3)
	3) Collect, create, and organize data in a digital chart or graph.	Animated Storytelling (
2.NI: Networking and the Internet	1) Identify appropriate and inappropriate behaviors for communicating in a digital environment.	Animated Storytelling ((3)
	2) Cite media and/or owners of digital content.	Animated Storytelling (
	3) Create a research-based product using online digital tools.	Standard not currently
2.IC: Impacts of Computing	1) Recognize and describe the potential risks and dangers associated with various forms of online communications (e.g., cell phones, social media, digital photos).	Animated Storytelling ((3)

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PLTW Launch Modules

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(1), Grids and Games (2), Programming Patterns (3)

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(1), Grids and Games (2), Programming Patterns



Core Concept	Standard	PLTW Launch Modules
s	1) Locate and use appropriate online tools and resources to explore, research, and collect data on specific topics (e.g., applications, web browsers, and online tutorials).	Grids and Games (2), Programming Patterns (3)
Founda	2) Communicate key ideas and details collaboratively in a way that informs, persuades, and/or entertains, using digital tools.	Grids and Games (2), Programming Patterns (3), Input/Output: Computer Systems (4)
ы Э. Ц.	3) Use basic features of digital tools to communicate key ideas and details in a way that informs and/or persuades.	Programming Patterns (3)
nic –	1) Discuss the design process and use digital tools to illustrate potential solutions.	Grids and Games (2), Programming Patterns (3), Input/Output: Computer Systems (4)
: Algoritl Thinking	2) Create an algorithm to solve a problem as a collaborative team.	Grids and Games (2), Programming Patterns (3), Input/Output: Computer Systems (4)
3.AT	3) Identify problems to solve and generate questions for investigations.	Grids and Games (2), Programming Patterns (3), Input/Output: Computer Systems (4)
Data ysis	1) Use data to highlight or propose cause-and-effect relationships, predict outcomes, or communicate an idea.	Input/Output: Computer Systems (4)
3.DA: Ana	2) Describe examples of data sets or databases from everyday life.	Input/Output: Computer Systems (4)
41: The rking net	1) Advocate, demonstrate, and routinely practice safe, legal, and responsible use of information and technology.	Grids and Games (2), Programming Patterns (3), Input/Output: Computer Systems (4)
3.l Netwo and Inte	2) Conduct basic keyword searches to produce valid, appropriate results, and evaluate results for accuracy, relevance, and appropriateness.	Standard not currently supported
s	1) Analyze a given list of sub-problems while addressing a larger problem.	Input/Output: Computer Systems (4)
Progran Concept	2) Define a problem or task, decompose it into smaller sub-problems.	Grids and Games (2), Programming Patterns (3), Input/Output: Computer Systems (4)
ы с с с с с с с с	3) Use numbers or letters to represent information in another form.	Input/Output: Computer Systems (4)





Core Concept	Standard	
4.FC: Foundational Concept	1) Demonstrate an appropriate level of proficiency in performing tasks using a range of digital devices.	Standard not currently
	2) Use age-appropriate online tools and resources (e.g., learning management systems, grade and assignment record, tutorial, assessment, web browser).	Programming Patterns Infection: Modeling and Challenge (5)
	3) Create a simple digital model of a system and explain what the model shows and does not show.	Programming Patterns
4.AT: Algorithmic Thinking	1) Examine logical reasoning to predict outcomes of an algorithm.	Input/Output: Compute (5), Robotics and Autor
	2) Use flowcharts to create a plan or algorithm.	Programming Patterns Infection: Modeling and Challenge (5)
	3) Construct a basic system of numbers, letters, or symbols to represent information as a cipher.	Input/Output: Compute
4.DA: Data Analysis	1) Collect, organize, analyze, and interpret data to identify solutions and/or make informed decisions.	Input/Output: Compute Infection: Modeling and
	2) Gather data to answer a question using a variety of computing and data visualization methods.	Input/Output: Compute Infection: Modeling and
4.NI: Networking and the Internet	1) Identify appropriate and inappropriate uses of communication technology and discuss the permanence of actions in the digital world.	Standard not currently
	2) Conduct advanced keyword searches to produce valid, appropriate results and evaluate results for accuracy, relevance, and appropriateness.	Standard not currently
4.PC: Programming Concepts	1) Test and debug a given program in a block-based visual programming environment using arithmetic operators, conditionals, and repetition in programs, in collaboration with others.	Programming Patterns Infection: Modeling and Challenge (5)
4.IC: Impacts of Computing	1) Identify laws and tools which help ensure that users of varying abilities can access electronic and information technology.	Standard not currently
	2) Explain how hardware and applications can enable everyone, including people with disabilities, to do things they could not do otherwise.	Programming Patterns



PLTW Launch Modules

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er Systems (4)

er Systems (4), Input/Output: Human Brain (4), Id Simulation (5)

er Systems (4), Input/Output: Human Brain (4), Id Simulation (5)

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s (3), Input/Output: Computer Systems (4), ad Simulation (5), Robotics and Automation:

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s (3), Input/Output: Computer Systems (4)



Core Concept	Performance Expectation	
5.FC: Foundational Concepts	1) Use advanced features of digital tools and media-rich resources to communicate key ideas and details in a way that informs, persuades, and/or entertains.	Input/Output: Compu (5)
5.AT: Algorithmic Thinking	1) Analyze and improve an algorithm that includes sequencing and simple patterns with or without a computing device.	Input/Output: Compu (5), Robotics and Auto
	2) Create an algorithm to solve a problem while detecting and debugging logical errors within the algorithm.	Input/Output: Compu (5), Robotics and Auto
	3) Develop and recommend solutions to a given problem and explain the process to an audience.	Input/Output: Compu (5), Robotics and Auto
5.DA: Data Analysis	1) Manipulate data to answer a question using a variety of computing methods and tools to collect, organize, graph, analyze, and publish the resulting information.	Input/Output: Compu (5)
	2) Connect data from a simulation to real-life events.	Infection: Modeling a
5.NI: Networking and the Internet	1) Explain responsible uses of technology and digital information; describe possible consequences of inappropriate use such as copyright infringement and piracy.	Input/Output: Compu (5)
	2) Apply copyright principles to real life scenarios.	Standard not current
5.PC: Programming Concepts	1) Create simple animated stories or solve pre-existing problems using a precise sequence of instructions and simple loops, collaboratively or individually.	Input/Output: Compu (5), Robotics and Auto
	2) Identify bugs (errors) in basic programming.	Input/Output: Compu (5), Robotics and Auto
5.IC: Impacts of Computing	1) Analyze the impact of social media on individuals, families, and society.	Robotics and Automa



PLTW Launch Modules

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