

Ford PAS Alignment to Tennessee Curriculum Standards

Module 5: Closing the Environmental Loop

This document is intended for schools and program sites to use when aligning the Ford PAS curriculum to the Tennessee Curriculum Standards. It lists the national academic content standards that are taught and applied (in aqua boxes) in this module and the corresponding Tennessee Curriculum Standard(s) by learning expectations (in white boxes). Note that this document identifies the most significant national academic standards that are addressed in this module so it does not correspond exactly to the Module Learning Goals in the Module 5 Teacher Guide. In some instances, standards listed here combine the language of more than one national standard or the wording is slightly modified to correspond more closely to the module content. This document uses the same abbreviations and number/letter designations that are in the Module Learning Goals tables in the Teacher Guide. "No corresponding Tennessee Curriculum Standard" means no state standard was found to match the national academic content standard. In addition, the activities in the module where the specific academic content knowledge is addressed are identified in the last column.

Ford PAS Tennessee Alignment		
Academic Content 1:	Prepare and deliver a presentation that shapes information to achieve a particular purpose and to appeal to the interests and knowledge of audience members. (NCEE/Pitt 3c)	
DISCIPLINE(S)	TENNESSEE CURRICULUM STANDARDS <input checked="" type="checkbox"/> Taught/Assessed <input type="checkbox"/> Applied	ACTIVITIES ADDRESSING ACADEMIC CONTENT
English Language Arts	<i>English II</i> Speaking and Listening Learning Expectation Bullet 6: Analyze audience and determine purpose in preparing oral presentations. Writing Learning Expectation Bullet 13: Research information to prepare presentations or reports which use summarizing, paraphrasing, direct quotations, citation of sources, and bibliographic entries.	Act. 1 <input type="checkbox"/> Act. 2 <input type="checkbox"/> Act. 3 <input type="checkbox"/> Act. 4 <input type="checkbox"/> Act. 5 <input type="checkbox"/> Act. 6 <input checked="" type="checkbox"/>
Academic Content 2:	Analyze data to interpret trends. (NCTM 5.3)	
DISCIPLINE(S)	TENNESSEE CURRICULUM STANDARDS <input checked="" type="checkbox"/> Taught/Assessed <input type="checkbox"/> Applied	ACTIVITIES ADDRESSING ACADEMIC CONTENT
Mathematics	<i>Algebra II</i> Data Analysis and Probability Learning Expectation 5.12: Choose, construct, and analyze appropriate graphical representations for a data set.	Act. 1 <input type="checkbox"/> Act. 2 <input type="checkbox"/> Act. 3 <input checked="" type="checkbox"/> Act. 4 <input type="checkbox"/> Act. 5 <input type="checkbox"/> Act. 6 <input type="checkbox"/>

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Academic Content 3: Science in Personal and Social Perspectives: Understand natural resources. (NRC F3)		
DISCIPLINE(S)	TENNESSEE CURRICULUM STANDARDS <input checked="" type="checkbox"/> Taught/Assessed <input type="checkbox"/> Applied	ACTIVITIES ADDRESSING ACADEMIC CONTENT
Science	<i>Ecology and Environmental Science</i> Natural Resources Learning Expectation 3.1: Explore the types, uses, and history of non-energy renewable and nonrenewable resources.	Act. 1 <input type="checkbox"/> Act. 2 <input checked="" type="checkbox"/> Act. 3 <input type="checkbox"/> Act. 4 <input type="checkbox"/> Act. 5 <input checked="" type="checkbox"/> Act. 6 <input checked="" type="checkbox"/>
Academic Content 4: Science in Personal and Social Perspectives: Understand environmental quality. (NRC F4)		
DISCIPLINE(S)	TENNESSEE CURRICULUM STANDARDS <input checked="" type="checkbox"/> Taught/Assessed <input type="checkbox"/> Applied	ACTIVITIES ADDRESSING ACADEMIC CONTENT
Science	<i>Ecology and Environmental Science</i> Natural Resources Learning Expectation 3.3: Determine the impact of waste production and management on the environment. Human Interaction with the Environment Learning Expectation 5.1: Understand causes, environmental effects and methods for controlling pollution.	Act. 1 <input type="checkbox"/> Act. 2 <input checked="" type="checkbox"/> Act. 3 <input type="checkbox"/> Act. 4 <input checked="" type="checkbox"/> Act. 5 <input checked="" type="checkbox"/> Act. 6 <input checked="" type="checkbox"/>
Academic Content 5: Science in Personal and Social Perspectives: Understand natural and human-induced hazards. (NRC F5)		
DISCIPLINE(S)	TENNESSEE CURRICULUM STANDARDS <input checked="" type="checkbox"/> Taught/Assessed <input type="checkbox"/> Applied	ACTIVITIES ADDRESSING ACADEMIC CONTENT
Science	<i>Biology</i> Interactions Learning Expectation 2.6: Examine the effects of human activity on ecosystems.	Act. 1 <input checked="" type="checkbox"/> Act. 2 <input type="checkbox"/> Act. 3 <input type="checkbox"/> Act. 4 <input checked="" type="checkbox"/> Act. 5 <input checked="" type="checkbox"/> Act. 6 <input checked="" type="checkbox"/>
Academic Content 6: Science, Technology, and Society: Make judgments about the transformation of the physical world and human society by science and technology. (NCSS 8b)		
DISCIPLINE(S)	TENNESSEE CURRICULUM STANDARDS <input checked="" type="checkbox"/> Taught/Assessed <input type="checkbox"/> Applied	ACTIVITIES ADDRESSING ACADEMIC CONTENT
Social Studies	<i>World History</i> History Learning Expectation 5.9: Understand the impact of developing technology on the world.	Act. 1 <input checked="" type="checkbox"/> Act. 2 <input type="checkbox"/> Act. 3 <input checked="" type="checkbox"/> Act. 4 <input type="checkbox"/> Act. 5 <input checked="" type="checkbox"/> Act. 6 <input type="checkbox"/>
Academic Content 7: Understand energy and power types, sources, and conversions. (McREL 5)		
DISCIPLINE(S)	TENNESSEE CURRICULUM STANDARDS <input checked="" type="checkbox"/> Taught/Assessed <input type="checkbox"/> Applied	ACTIVITIES ADDRESSING ACADEMIC CONTENT
Engineering	No corresponding Tennessee Curriculum Standard.	Act. 1 <input type="checkbox"/> Act. 2 <input type="checkbox"/> Act. 3 <input checked="" type="checkbox"/> Act. 4 <input type="checkbox"/> Act. 5 <input type="checkbox"/> Act. 6 <input type="checkbox"/>
Science	<i>Ecology and Environmental Science</i> Energy Learning Expectation 4.1: Explore both conventional and alternative energy sources. Energy Learning Expectation 4.2: Understand the types of energy related pollution.	

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	<p>Energy Learning Expectation 4.3: Compare various methods of energy conservation.</p> <p><i>Earth Science</i></p> <p>Energy in the Earth System Learning Expectation 2.1: Investigate energy sources.</p> <p>Energy in the Earth System Learning Expectation 2.3: Evaluate alternative energy sources.</p>	
Technology	No corresponding Tennessee Curriculum Standard.	
Academic Content 8:	Use the design process to solve problems. (McREL 14)	
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Engineering	No corresponding Tennessee Curriculum Standard.	Act. 1 <input type="checkbox"/> Act. 2 <input type="checkbox"/> Act. 3 <input type="checkbox"/> Act. 4 <input type="checkbox"/> Act. 5 <input type="checkbox"/> Act. 6 <input checked="" type="checkbox"/>
Science	No corresponding Tennessee Curriculum Standard.	
Technology	<p><i>Technology Engineering</i></p> <p>Engineering Processes Learning Expectation 7.1: Apply steps in the problem-solving process.</p> <p>Technology Systems Learning Expectation 4.8: Choose appropriate design process for a specific problem.</p>	
Academic Content 9:	Use technology for solving problems and making informed decisions. (ISTE 6.1)	
DISCIPLINE(S)	TENNESSEE CURRICULUM STANDARDS <input checked="" type="checkbox"/> Taught/Assessed <input type="checkbox"/> Applied	ACTIVITIES ADDRESSING ACADEMIC CONTENT
Technology	<p><i>Technology Engineering</i></p> <p>Problems and Solutions in Technology Learning Expectation 5.4: Solve problems, think critically, and make decisions related to technology.</p> <p>Technology Systems Learning Expectation 3.4: Comprehend the concept that new products and systems can be developed to solve problems or to help do things that could not be done without the help of technology.</p>	Act. 1 <input type="checkbox"/> Act. 2 <input type="checkbox"/> Act. 3 <input checked="" type="checkbox"/> Act. 4 <input type="checkbox"/> Act. 5 <input type="checkbox"/> Act. 6 <input type="checkbox"/>
Academic Content 10:	Use technology to develop strategies for solving problems in the real world. (ISTE 6.2)	
DISCIPLINE(S)	TENNESSEE CURRICULUM STANDARDS <input checked="" type="checkbox"/> Taught/Assessed <input type="checkbox"/> Applied	ACTIVITIES ADDRESSING ACADEMIC CONTENT
Technology	<p><i>Technology Engineering</i></p> <p>Problems and Solutions in Technology Learning Expectation 1.8.3: Assess situation and apply problem-solving and decision-making skills to particular needs in the community and workplace.</p>	Act. 1 <input type="checkbox"/> Act. 2 <input type="checkbox"/> Act. 3 <input checked="" type="checkbox"/> Act. 4 <input type="checkbox"/> Act. 5 <input type="checkbox"/> Act. 6 <input checked="" type="checkbox"/>

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	Technology Systems Learning Expectation 1.3: Assess situation and apply problem-solving and decision-making skills to particular needs in the community and workplace.	
Academic Content 11:	Understand the effects of technology on the environment. (ITEA 5)	
DISCIPLINE(S)	TENNESSEE CURRICULUM STANDARDS <input checked="" type="checkbox"/> Taught/Assessed <input type="checkbox"/> Applied	ACTIVITIES ADDRESSING ACADEMIC CONTENT
Technology	<i>Technology Engineering</i> Problems and Solutions in Technology Learning Expectation 10.1: Examine the positive or negative impact of technology on the environment. Technology Systems Learning Expectation 4.2: Realize the relationship between technology and society.	Students apply this standard throughout this module.
Academic Content 12:	Apply a wide range of strategies to comprehend, interpret, evaluate, and appreciate texts. (NCTE/IRA 3)	
DISCIPLINE(S)	TENNESSEE CURRICULUM STANDARDS <input type="checkbox"/> Taught/Assessed <input checked="" type="checkbox"/> Applied	ACTIVITIES ADDRESSING ACADEMIC CONTENT
English Language Arts	<i>English II</i> Reading Learning Expectation Bullet 2: Discern reading strategies appropriate to text. Reading Learning Expectation Bullet 5: Improve comprehension by interpreting, analyzing, synthesizing, and evaluating written text.	Act. 1 <input checked="" type="checkbox"/> Act. 2 <input checked="" type="checkbox"/> Act. 3 <input type="checkbox"/> Act. 4 <input checked="" type="checkbox"/> Act. 5 <input type="checkbox"/> Act. 6 <input checked="" type="checkbox"/>
Academic Content 13:	Science in Personal and Social Perspectives: Understand science and technology in local, national, and global challenges. (NRC F6)	
DISCIPLINE(S)	TENNESSEE CURRICULUM STANDARDS <input type="checkbox"/> Taught/Assessed <input checked="" type="checkbox"/> Applied	ACTIVITIES ADDRESSING ACADEMIC CONTENT
Science	No corresponding Tennessee Curriculum Standard.	Students apply this standard throughout this module.