Correlations to PLT Secondary Modules & Minnesota Academic Standards in Mathematics

	Strand	Sub-Strand	Standard	Module Name: / PLT Activity Numbers: / Benchmark	Focus on Forests 1	2	3	4	5	6	7	8	Forest Ecology 1	2	3	4	5	6	7	8	Municipal Solid Waste 1	2	3	4	5	6	7	8	Focus on Risk 1	2	3	4	5	6	7	8-a	8-b	8-c	8-d
					What's a Forest to You?	Old-Growth Forests	Tough Choices	Who Owns America's Forests?	Balancing America's Forests	Squirrels vs. Scopes	Words to Live By	Take Action!	Adopt-a-Forest	Cast of Thousands	The Nature of Plants	Home Sweet Home	Saga of the Gypsy Moth	Story of Succession	Understanding Fire	Fire Management	Introduction to Municipal Solid Waste: The Waste Stream	Source Reduction	Recycling and Economics	Composting	Waste-to-Energy	Landfills	Where Does Your Garbage Go?	Take Action: Success Stories & Personal Choices	What is Risk?	Things Aren't Always What They Seem	Chances Are...Understanding Probability and Risk	Risk Assessment: Tools of the Trade	Communicating Risk	Weighing the Options: A Look at Tradeoffs	Decision-Making: Ecological Risk, Wildfires, and Natural Hazards	Special Topic: Electromagnetic Fields	Special Topic: Chlorine	Special Topic: Plastics, Risk/Benefit Analysis & Environmental Legislation	Taking Action: Reducing Risk in You School or Community
Grade 4	IV. Data Analysis, Statistics, and Probablility	A. Data & Statistics	Represent and interpret data in real-world and mathematical problems.	1. Collect data using observations or surveys.	X								X	X							X	X	X	X			X	X						X					
Grade 6	II. Number Sense and Computations	B. Computation and Operation	Compute fluently and make reasonable estimates with postive and negative rational numbers in real-world and mathematical problems. Understand the meanings of arithmetic operations and factorization, and how they relate to o ne another. Appropriately use calculators and other technologies to solve problems.	8. Find, represent and use percentages in real-world and mathematical problems, including percentages greater than 100% and less than 1%.																	X		X																		
Grade 6	IV. Data Analysis, Statistics, and Probablility	A. Data & Statistics	Represent data and use various measures associated with data to draw conclusions and indentify trends.	1. Collect, organize and represent categorical and numerical data with tables and bar graphs.											X			X			X		X	X	X		X	X											
Grade 6		B. Probability	Calculate and express probabilities numerically, and apply probability concepts to solve real-world and mathematical problems.	2. Represent all possible outcomes for a probablity problems with tables, grids, and tree diagrams to calculate probablities and draw conclusions form the results.																											X									
Grade 6	V. Spatial Sense, Geometry, and Measurement	C. Measurement	Make calculations of time, length, area, and volumn within standard measuring systems, using good judgment in choice of units.	1. Solve problems requiring conversion of units within the U.S. customary system, and within the metric system.															X		X																		
Grade 6				3. Find the area and perimeter of a rectangle by measuring, using a grid or using a formula, and label the answer with appropriate units.										X							X																		

X = significant correlation
0 = some correlation

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	Strand	Sub-Strand	Standard	Benchmark	Focus on Forests: 1 What's a Forest to You?	2 Old-Growth Forests	3 Tough Choices	4 Who Owns America's Forests?	5 Balancing America's Forests	6 Squirrels vs. Scopes	7 Words to Live By	8 Take Action!	Forest Ecology: 1 Adopt-a-Forest	2 Cast of Thousands	3 The Nature of Plants	4 Home Sweet Home	5 Saga of the Gypsy Moth	6 Story of Succession	7 Understanding Fire	8 Fire Management	Municipal Solid Waste: 1 Introduction to Municipal Solid Waste: The Waste Stream	2 Source Reduction	3 Recycling and Economics	4 Composting	5 Waste-to-Energy	6 Landfills	7 Where Does Your Garbage Go?	8 Take Action: Success Stories & Personal Choices	Focus on Risk: 1 What is Risk?	2 Things Aren't Always What They Seem	3 Chances Are...Understanding Probability and Risk	4 Risk Assessment: Tools of the Trade	5 Communicating Risk	6 Weighing the Options: A Look at Tradeoffs	7 Decision-Making: Ecological Risk, Wildfires, and Natural Hazards	8-a Special Topic: Electromagnetic Fields	8-b Special Topic: Chlorine	8-c Special Topic: Plastics, Risk/Benefit Analysis & Environmental Legislation	8-d Taking Action: Reducing Risk in You School or Community
Grade 7	V. Spatial Sense, Geometry, and Measurement	B. Geometry	Use basic geometric principles and proportional reasoning reasoning to solve real-world and mathematical problems.	1. Calculate the radius, diameter, circumference and area of a circle given any one of these.										X																								
Grade 7				3. Use ratios and proportions to interpret map scales and scale drawings																				X														
Grade 8	III. Patterns, Functions, and Algebra	B. Algebra (Algebraic Thinking)	Use algebraic operations to generate equivalent expressions, and use proportional reasoning to solve real-world and mathematical problems. Demonstrate the ability to manipulate an equation by applying arithmetic operations to both sides to maintain equivalence.	3. Use proportions and percents with one unknown quantity to solve real-world and mathematical problems.										X									X														
Grade 8	IV. Data Analysis, Statistics, and Probablility	A. Data & Statistics	Represent data and use various measures associated with data to draw conclusions and identify trends.	1. Construct and analyze histograms, circle graphs, stem and leaf plots and box-whisker-plots.				X															X														
Grade 8	V. Spatial Sense, Geometry, and Measurement	C. Measurement	Make calculations of time, length, area, and volumn within standard measuring systems, using good judgment in choice of units.	Find approximate equivalent measures of length, temperature and weight for common units in U.S customary and metric measuring systems.																			X														
Grades 9, 10, 11	IV. Data Analysis, Statistics, and Probablility	A. Data & Statistics	Represent data and use various measures associated with data to draw conclusions and identify trends. Understand the effects of display distortion and measurement error on the interpretation of data.	Construct and analyze histograms, circle graphs, stem and leaf plots and box-whisker-plots.																																		
				2.Use measures of central tendency and variability, such as mean, median, maximum, minimum, range, standard deviation, quartile and percentile, to describe, compare and draw conclusions about sets of data.																								X	X			X						

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	Strand	Sub-Strand	Standard	Module Name: / PLT Activity Numbers: / Benchmark	Focus on Forests 1	2	3	4	5	6	7	8	Forest Ecology 1	2	3	4	5	6	7	8	Municipal Solid Waste 1	2	3	4	5	6	7	8	Focus on Risk 1	2	3	4	5	6	7	8-a	8-b	8-c	8-d
					What's a Forest to You?	Old-Growth Forests	Tough Choices	Who Owns America's Forests?	Balancing America's Forests	Squirrels vs. Scopes	Words to Live By	Take Action!	Adopt-a-Forest	Cast of Thousands	The Nature of Plants	Home Sweet Home	Saga of the Gypsy Moth	Story of Succession	Understanding Fire	Fire Management	Introduction to Municipal Solid Waste: The Waste Stream	Source Reduction	Recycling and Economics	Composting	Waste-to-Energy	Landfills	Where Does Your Garbage Go?	Take Action: Success Stories & Personal Choices	What is Risk?	Things Aren't Always What They Seem	Chances Are...Understanding Probability and Risk	Risk Assessment: Tools of the Trade	Communicating Risk	Weighing the Options: A Look at Tradeoffs	Decision-Making: Ecological Risk, Wildfires, and Natural Hazards	Special Topic: Electromagnetic Fields	Special Topic: Chlorine	Special Topic: Plastics, Risk/Benefit Analysis & Environmental Legislation	Taking Action: Reducing Risk in You School or Community
Grades 9, 10, 11				5. Understand the relationship between correlation and causation.																								X	X											
		B. Probability	Use appropriate counting procedures, calculate probabilities in various ways and apply theoretical probability concepts to solve real-world and mathematical problems.	3. Use probability models, including area and binomial models, in real-world and mathematical problems.																											X	X								
				6. Use a variety of experimental, simulation and theoretical methods to calculate probabilities.																										X					X				
				2. Use probablity trees in real-world situations.																															X				
Grades 9, 10, 11	V. Spatial Sense, Geometry, & Measurement	B. Geometry	Apply basic theorems of plane geometry, right triangle trigonometry, coordinate geometry and a variety of visualization tools to solve real-world and mathematical problems.	4. Apply the basic concepts of right triangle trigonometry including sine, cosine and tangent to solve real-world and mathematical problems.										X																										
		C. Measurement	Use the interconnectedness of geometry, algebra, and measurement to explore real-world mathematical problems.											X																										
Grades 11, 12	I. Statistics		Use tables of the normal distribution & properties of that distribution to make judgments about populations based on random samples from these populations.	1. Use the concept of normal distribution and its properties to answer questions about sets of data.																											X									
				2. Calculate confidence intervals.																																				

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Correlations to PLT Secondary Modules & Minnesota Academic Standards in Mathematics			Module Name:	Focus on Forests								Forest Ecology								Municipal Solid Waste								Focus on Risk									
			PLT Activity Numbers:	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8-a	8-b	8-c	8-d
Strand	Sub-Strand	Standard	Benchmark	What's a Forest to You?	Old-Growth Forests	Tough Choices	Who Owns America's Forests?	Balancing America's Forests	Squirrels vs. Scopes	Words to Live By	Take Action!	Adopt-a-Forest	Cast of Thousands	The Nature of Plants	Home Sweet Home	Saga of the Gypsy Moth	Story of Succession	Understanding Fire	Fire Management	Introduction to Municipal Solid Waste: The Waste Stream	Source Reduction	Recycling and Economics	Composting	Waste-to-Energy	Landfills	Where Does Your Garbage Go?	Take Action: Success Stories & Personal Choices	What is Risk?	Things Aren't Always What They Seem	Chances Are...Understanding Probability and Risk	Risk Assessment: Tools of the Trade	Communicating Risk	Weighing the Options: A Look at Tradeoffs	Decision-Making: Ecological Risk, Wildfires, and Natural Hazards	Special Topic: Electromagnetic Fields	Special Topic: Chlorine	Special Topic: Plastics, Risk/Benefit Analysis & Environmental Legislation	Taking Action: Reducing Risk in You School or Community

The Project Learning Tree PreK-8 Activity Guide is written from a comprehensive environmental systems-based perspective and is multidisciplinary and cross-curricular in nature. Many lessons cover a wide spectrum of topics.

This correlations system represents PLT's interpretation of the Minnesota Academic Standards and their relation to the PLT PreK-8 Activity Guide (2006 revision). The activities are correlated to the Minnesota Academic Standards to illustrate the level to which the lessons address the learning benchmarks within the standards. No activities are designed to specifically meet the U.S. National Education Standards or the Minnesota Academic Standards. Individual educators are responsible for addressing specific requirements outlined within the Minnesota Academic Standards. Although each PLT activity provides assessment suggestions, individual educators are responsible for assessing student work. We strongly encourage all educators to modify lessons from the PLT Guide as they best see fit.

The grid below suggests correlations between each PLT activity and the MN Academic Benchmarks it addresses. An "x" means that the activity partially or fully addresses the concepts and language used in the Benchmark. An "o" means that the activity introduces the concepts and language used in the Benchmark.

We welcome your comments and suggestions regarding the accuracy and usefulness of this system.
We sincerely hope you will find these correlations useful as you integrate PLT activities into your curriculum.