Correlating PLT Activities to National Next Generation Science Standards

To best correlate the new performance expectations to the PLT activities we created a scale to explain to what degree the performance expectation was addressed.

There are three categories:
■ indicates that the activity addresses the performance expectation and that it is the main focus of the activity
◆ indicates that the activity incorporates the performance expectation and that it is easily addressed with little adaptation
● indicates that the activity vaguely addresses the performance expectation but with minor adaptations to the activity it could be addressed

Activity #13 We All Need Trees (page 65)
Grades: PreK-6

Grade Level/Subject	Standard	Correlation Scale
K Interdependent Relationships in Ecosystems: Animals, Plants and Their Environment	**K-ESS3-3** Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment	◆
2nd Structures and Properties of Matter	**2-PS1-1** Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties	■
Middle School Structure and Properties of Matter	**MS-PS1-3** Gather and make sense of information to describe that synthetic materials come from natural resources and impact society	■

Activity #14 Renewable or Not (page 69)
Grades: 4-8

Grade Level/Subject	Standard	Correlation Scale
5th Earth's Systems	**5-ESS3-1** Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment	◆
Middle School Structure and Properties of Matter	**MS-PS1-3** Gather and make sense of information to describe that synthetic materials come from natural resources and impact society	◆
Middle School Matter and Energy in Organisms and Ecosystems	**MS-LS2-1** Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of	◆

	organisms in an ecosystem	
Middle School Human Impacts	**MS-ESS3-3** Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment	■
Middle School Human Impacts	**MS-ESS3-4** Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems	■

Activity #22: Trees as Habitat (page 102)

Grades: K-2 (Part A)

Grades: 3-8 (Part B)

Grade Level/Subject	Standard	Correlation Scale
K Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment	**K-LS1-1** Use observations to describe patterns of what plant and animals (including humans) need to survive **K-ESS2-2** Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs	■ ◆
2nd Interdependent Relationships in Ecosystems	**2-LS4-1** Make observations of plants and animals to compare the diversity of life in different habitats	● (STEM Extension)
3rd Interdependent Relationships in Ecosystems	**3-LS3-3** Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all	●

Activity #44 Water Wonders (page 188)

Grades: 4-8

Grade Level/Subject	Standard	Correlation Scale
5th Earth's Systems	**5-ESS2-2** Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth	◆
5th Earth's Systems	**5-ESS3-1** Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment	■
Middle School Human Impacts	**MS-ESS3-3** Apply scientific principles to design a method for monitoring and minimizing a	■

	human impact on the environment	
Middle School Human Impacts	**MS – ESS3-4** Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems	◆

Activity #50 400 Acre Wood (page 217)

Grades: 7-8

Grade Level/Subject	Standard	Correlation Scale
Middle School Human Impacts	**MS-ESS3-3** Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment	■
Middle School Human Impacts	**MS-ESS3-4** Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems	■

Activity #63 Tree Factory (page 269)

Grades: 3-6

Variation: Pre-K-2

Grade Level/Subject	Standard	Correlation Scale
3rd Biological evolution: unity and diversity	**3-LS4-3** Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.	◆
3rd Heredity: inheritance and variation of traits	**3-LS3-2** Use evidence to support the explanation that traits can be influenced by the environment.	●
4th From Molecules to Organisms: Structures and Processes	**4LS-1** Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction	■
5th Energy	**5-PS3-1** Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was one energy from the sun	◆
5th From Molecules to Organisms: Structures and Processes	**5-LS1-1** Support an argument that plants get the materials they need from growth chiefly from air and water	■
3-5th Engineering Design	**3-5-ETS1-1** Define a simple design problem reflecting a need or a want that	●

	includes specified criteria for success and constraints on materials, time, or cost.	
MS From Molecules to Organisms: Structures and Processes	**MS-LS1-6** Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.	◆
MS From Molecules to Organisms: Structures and Processes	**MS-LS1-4** Use argument based on empirical evidence and scientific reasoning to support an explanation for howcharacteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively.	●

Variation Correlations, **Pre-K-2**

K From Molecules to Organisms: Structures and Processes	**K-LS1-1** Use observations to describe patterns of what plants and animals (including humans) need to survive	◆
K Earth and Human Activity	**K-ESS3-1** Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.	●
1st From Molecules to Organisms: Structures and Processes	**1-LS1-1** Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs	●
2nd Ecosystems: Interactions, Energy, and Dynamics	**2-LS2-1** Plan and conduct an investigation to determine if plants need sunlight and water to grow.	■

Activity #67 How Big Is Your Tree? (page 284)

Grades: 4-8

Variation: Pre-K-2

Grade Level/Subject	Standard	Correlation Scale
4th Earth and Human Activity	**4-ESS3-1** Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.	●
Middle School Ecosystems: Interactions, Energy, and Dynamics	**MS-LS2-1** Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.	◆

Middle School Ecosystems: Interactions, Energy, and Dynamics	**MS-LS2-5** Evaluate competing design solutions for maintaining biodiversity and ecosystem services.	●
Middle School From Molecules to Organisms: Structures and Processes	**MS-LS1-5** Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms	●

Variation Correlations, Pre-K-2

1st Heredity: Inheritance and Variation of Traits	**1-LS3-1** Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.	●
2nd Biological Evolution: Unity and Diversity	**2-LS4-1** Make observations of plants and animals to compare the diversity of life in different habitats.	●
3rd Heredity: Inheritance and Variation of Traits	**3-LS3-2** Use evidence to support the explanation that traits can be influenced by the	●

Activity #81: Living with Fire (page 350)
Grades 4-8 (Part A and Part B)
Grades K-2 (Part C)

Grade Level/Subject	Standard	Correlation Scale
K Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment	**K-ESS3-1** Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things	◆
3rd Interdependent Relationships in Ecosystems	**3-LS3-3** Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all	■
	3-LS4-4 Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals there may change	■
Weather and Climate	**3-ESS3-1** Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard	◆
5th Earth's Systems	**5-ESS3-1** Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environments	◆

Middle School Matter and Energy in Organisms and Ecosystems Interdependent Relationships in Ecosystems Human Impacts	**MS-LS2-4** Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations **MS-LS2-5** Evaluate competing design solutions for maintaining biodiversity and ecosystem services **MS-LS2-1** Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem **MS-ESS3-3** Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment	● ● (STEM Extension) ■ ◆