

Michigan Project Learning Tree PreK-8 Guide

Michigan Grade Level Content Expectations – Science

X = Addresses/Supports

	1. The Shape of Things	2. Get In Touch with Trees	3. Peppermint Beetle	4. Sounds Around	5. Poet-Tree	6. Picture This!	7. Habitat Pen Pals	8. The Forest of S.T. Shrew	9. Planet Diversity	10. Charting Diversity	11. Can It Be Real?	12. Invasive Species	13. We All Need Trees	14. Renewable or Not?	15. A Few of My Favorite Things	16. Pass the Plants, Please	17. People of the Forest	18. Tale of the Sun
GRADE 6																		
S.IP.M.1 Inquiry involves generating questions, conducting investigations, and developing solutions to problems through reasoning and observation.																		
S.IP.06.11 Generate scientific questions based on observations, investigations, and research.		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S.IP.06.13 Use tools and equipment (spring scales, stop watches, meter sticks and tapes, models, hand lens, thermometer, models, sieves, microscopes) appropriate to scientific investigations.									X									
S.IP.06.14 Use metric measurement devices in an investigation.				X					X									
S.IP.06.15 Construct charts and graphs from data and observations.				X					X	X		X			X			
S.IP.06.16 Identify patterns in data.				X					X	X				X		X		
S.IA.M.1 Inquiry includes an analysis and presentation of findings that lead to future questions, research, and investigations.																		
S.IA.06.11 Analyze information from data tables and graphs to answer scientific questions.				X					X	X		X	X			X		
S.IA.06.13 Communicate and defend findings of observations and investigations using evidence.		X	X	X			X		X		X		X	X	X	X	X	
S.IA.06.14 Draw conclusions from sets of data from multiple trials of a scientific investigation.				X														
S.RS.M.1 Reflecting on knowledge is the application of scientific knowledge to new and different situations. Reflecting on knowledge requires careful analysis of evidence that guides decision-making and the application of science throughout history and within society.																		
S.RS.06.11 Evaluate the strengths and weaknesses of claims, arguments, and data.											X			X				

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L.EC.06.21 Describe common patterns of relationships between and among populations (competition, parasitism, symbiosis, predator/prey).												X						
L.EC.06.23 Predict how changes in one population might affect other populations based upon their relationships in the food web.												X					X	
L.EC.M.4 Environmental Impact of Organisms- All organisms (including humans) cause change in the environment where they live. Some of the changes are harmful to the organism or other organisms, whereas others are helpful.																		
L.EC.06.41 Describe how human beings are part of the ecosystem of the Earth and that human activity can purposefully, or accidentally, alter the balance in ecosystems.												X		X	X		X	
L.EC.06.42 Predict possible consequences of overpopulation of organisms, including humans, (for example: species extinction, resource depletion, climate change, pollution).												X		X	X		X	

Michigan Project Learning Tree PreK-8 Guide Michigan Grade Level Content Expectations – Science X = Addresses/Supports	19. Viewpoints on the Line	20. Environmental Exchange Box	21. Adopt a Tree	22. Trees as Habitats	23. The Fallen Log	24. Nature’s Recyclers	25. Birds and Worms	26. Dynamic Duos	27. Every Tree for Itself	28. Air Plants	29. Rain Reasons	30. Three Cheer for Trees	31. Plant a Tree	32. A Forest of Many Uses	33. Forest Consequences	34. Who Works in this Forest?	35. Loving It Too Much	36. Pollution Search
GRADE 6																		
S.IP.M.1 Inquiry involves generating questions, conducting investigations, and developing solutions to problems through reasoning and observation.																		
S.IP.06.11 Generate scientific questions based on observations, investigations, and research.	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X
S.IP.06.12 Design and conduct scientific investigations.						X					X							
S.IP.06.13 Use tools and equipment (spring scales, stop watches, meter sticks and tapes, models, hand lens, thermometer, models, sieves, microscopes) appropriate to scientific investigations.			X							X	X							
S.IP.06.14 Use metric measurement devices in an investigation.			X								X							
S.IP.06.15 Construct charts and graphs from data and observations.		X	X		X	X	X				X						X	X
S.IP.06.16 Identify patterns in data.				X		X	X				X						X	
S.IA.M.1 Inquiry includes an analysis and presentation of findings that lead to future questions, research, and investigations.																		
S.IA.06.11 Analyze information from data tables and graphs to answer scientific questions.											X						X	
S.IA.06.13 Communicate and defend findings of observations and investigations using evidence.		X	X	X	X	X	X				X				X			X
S.IA.06.14 Draw conclusions from sets of data from multiple trials of a scientific investigation.						X					X							
S.RS.M.1 Reflecting on knowledge is the application of scientific knowledge to new and different situations. Reflecting on knowledge requires careful analysis of evidence that guides decision-making and the application of science throughout history and within society.																		
S.RS.06.11 Evaluate the strengths and weaknesses of claims, arguments, and data.	X														X			

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S.RS.06.12 Describe limitations in personal and scientific knowledge.	X													X				
S.RS.06.15 Demonstrate scientific concepts through various illustrations, performances, models, exhibits, and activities.							X											
S.RS.06.17 Describe the effect humans and other organisms have on the balance of the natural world.	X			X	X				X	X			X	X	X	X	X	X
<p>L.OL.M.5 Producers, Consumers, and Decomposers- All animals, including humans, are consumers that meet their energy by eating other organisms or their products. Consumers break down the structures of the organisms they eat to make the materials they need to grow and function. Decomposers, including bacteria and fungi, use dead organisms or their products to meet their energy needs.</p>																		
L.OL.06.51 Classify organisms (producers, consumers, and decomposers) based on their source of energy for growth and development.					X	X		X										
L.OL.06.52 Distinguish between the ways in which consumers and decomposers obtain energy.				X	X	X												
<p>L.EC.M.1 Interactions of Organisms- Organisms of one species form a population. Populations of different organisms interact and form communities. Living communities and nonliving factors that interact with them form ecosystems.</p>																		
L.EC.06.11 List examples of populations, communities, and ecosystems including the Great Lakes region.		X																
<p>L.EC.M.2 Relationships of Organisms- Two types of organisms may interact with one another in several ways: They may be in a producer/consumer, predator/prey, or parasite/host relationship. Some organisms may scavenge or decompose another. Relationships may be competitive or mutually beneficial. Some species have become so adapted to each other that neither could survive without the other.</p>																		

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<p>L.EC.M.2 Relationships of Organisms- Two types of organisms may interact with one another in several ways: They may be in a producer/consumer, predator/prey, or parasite/host relationship. Some organisms may scavenge or decompose another. Relationships may be competitive or mutually beneficial. Some species have become so adapted to each other that neither could survive without the other.</p>																			
<p>L.EC.06.21 Describe common patterns of relationships between and among populations (competition, parasitism, symbiosis, predator/prey).</p>								X			X		X						
<p>L.EC.06.22 Explain how two populations of organisms can be mutually beneficial and how that can lead to interdependency.</p>								X											
<p>L.EC.06.23 Predict how changes in one population might affect other populations based upon their relationships in the food web.</p>								X			X		X						
<p>L.EC.M.4 Environmental Impact of Organisms- All organisms (including humans) cause change in the environment where they live. Some of the changes are harmful to the organism or other organisms, whereas others are helpful.</p>																			
<p>L.EC.06.41 Describe how human beings are part of the ecosystem of the Earth and that human activity can purposefully, or accidentally, alter the balance in ecosystems.</p>	X	X						X	X		X		X						X
<p>L.EC.06.42 Predict possible consequences of overpopulation of organisms, including humans, (for example: species extinction, resource depletion, climate change, pollution).</p>									X				X						

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S.IP.M.1 Inquiry involves generating questions, conducting investigations, and developing solutions to problems through reasoning and observation.																		
S.IP.06.11 Generate scientific questions based on observations, investigations, and research.	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X
S.IP.06.12 Design and conduct scientific investigations.																X	X	X
S.IP.06.13 Use tools and equipment (spring scales, stop watches, meter sticks and tapes, models, hand lens, thermometer, models, sieves, microscopes) appropriate to scientific investigations.											X	X	X				X	X
S.IP.06.14 Use metric measurement devices in an investigation.											X	X	X				X	
S.IP.06.15 Construct charts and graphs from data and observations.				X			X				X		X			X	X	X
S.IP.06.16 Identify patterns in data.																X	X	X
S.IA.M.1 Inquiry includes an analysis and presentation of findings that lead to future questions, research, and investigations.																		
S.IA.06.11 Analyze information from data tables and graphs to answer scientific questions.													X			X	X	X
S.IA.06.12 Evaluate data, claims, and personal knowledge through collaborative science discourse.																	X	
S.IA.06.13 Communicate and defend findings of observations and investigations using evidence.	X	X	X	X								X	X			X	X	X
S.IA.06.14 Draw conclusions from sets of data from multiple trials of a scientific investigation.																X	X	X
S.IA.06.15 Use multiple sources of information to evaluate strengths and weaknesses of claims, arguments, or data.		X		X												X	X	

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L.EC.06.31 Identify the living (biotic) and nonliving (abiotic) components of an ecosystem.														X				
L.EC.M.4 Environmental Impact of Organisms- All organisms (including humans) cause change in the environment where they live. Some of the changes are harmful to the organism or other organisms, whereas others are helpful.																		
L.EC.06.41 Describe how human beings are part of the ecosystem of the Earth and that human activity can purposefully, or accidentally, alter the balance in ecosystems.		X						X	X		X	X	X	X		X	X	
L.EC.06.42 Predict possible consequences of overpopulation of organisms, including humans, (for example: species extinction, resource depletion, climate change, pollution).												X	X	X		X	X	

Michigan Project Learning Tree PreK-8 Guide Michigan Grade Level Content Expectations – Science X = Addresses/Supports	91. In The Good Old Days	92. A Look at Lifestyles	93. Paper Civilizations	94. By The Rivers of Babylon	95. Did You Notice?	96. Improve Your Place
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S.IP.M.1 Inquiry involves generating questions, conducting investigations, and developing solutions to problems through reasoning and observation.						

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S.IP.06.11 Generate scientific questions based on observations, investigations, and research.	X	X	X	X	X	X
S.IA.M.1 Inquiry includes an analysis and presentation of findings that lead to future questions, research, and investigations.						
S.IA.06.13 Communicate and defend findings of observations and investigations using evidence.						X
S.RS.M.1 Reflecting on knowledge is the application of scientific knowledge to new and different situations. Reflecting on knowledge requires careful analysis of evidence that guides decision-making and the application of science throughout history and within society.						
S.RS.06.17 Describe the effect humans and other organisms have on the balance of the natural world.		X		X		
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L.EC.06.41 Describe how human beings are part of the ecosystem of the Earth and that human activity can purposefully, or accidentally, alter the balance in ecosystems.		X		X		
L.EC.06.42 Predict possible consequences of overpopulation of organisms, including humans, (for example: species extinction, resource depletion, climate change, pollution).				X		