

# Next Generation Science Standards met by *Climate Change and Michigan Forests*



Lesson

Standard

	Standard	Performance Expectations								Science and Engineering Practices							
		Molecules to Organisms: Structures & Processes (MS-LS1)			Ecosystems: Interactions, Energy, and Dynamics (MS-LS2)				Earth and Human Activity (MS-ESS3)		Engaging in Argument from Evidence	Constructing Explanations and Designing Solutions	Asking Questions and Defining Problems	Obtaining, Evaluating and Communicating Information	Developing and Using Models	Analyzing and Interpreting Data	Planning and Carrying Out Investigations
		4	5	6	1	2	4	5	4	5							
1	Get in Touch with Trees!																
2	Connections to Climate Change																
3	Down to the Core!																
4	Scientific Modeling																
5	Making Sense of Data!																
6	Climate and Plant Growth																
7	Regional Impacts and Predictions																
8	Student Actions																
9	Student Conference																
	Field Trip																

MS-LS1-4: Use arguments based on empirical evidence and scientific reasoning to support an explanation for how specialized plant structures affect the probability of successful reproduction of plants.

5: Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.

MS-LS2-1: Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations in an ecosystem.

2: Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.

4: Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.

5: Evaluate competing design solutions for maintaining biodiversity and ecosystem services.

MS-4: Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.

ESS3-5: Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.



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Disciplinary Core Ideas

Crosscutting Concepts

	Lesson	Disciplinary Core Ideas											Crosscutting Concepts									
		Life Sciences							Physical Sciences	Earth and Space Sciences				Cause and Effect	Energy and Matter	Patterns	Stability and Change	Structure and Function	Systems and System Models	Scale, Proportion, and Quantity		
		Growth and Development of Organisms	Organization of Matter and Energy Flow in Organisms	Interdependent Relationships in Ecosystems	Cycles of Matter and Energy Transfer in Ecosystems	Ecosystems Dynamics, Functioning, and Resilience	Social Interaction and Group Behavior	Biodiversity and Humans	Energy in Chemical Processes and Everyday Life	Natural Resources	Human Impacts on Earth Systems	Global Climate Change	Developing Possible Solutions								Weather and Climate	
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