

**MEECS to Michigan K-12 Science Standards
November 2015**

Water Quality (grades 6-8)

	1. Where Is All the Water in the World?	2. How We Use Water?	3. Do You Know YOUR Watershed?	4. How Do Land Uses Affect Water Quality?	5. Why Care About Groundwater?	6. Would You Drink This Water?	7. How Healthy Is This Stream?	8. How Can We Stop Storm Water?
Middle School								
MS-ESS2-4. Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity	X		X	X	X	X		
MS-ESS3-4. Construct an argument supported by evidence for how increases in human population and per-capital consumption of natural resources impact Earth's systems.	X	X	X		X	X	X	
MS-ESS2-6. Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates.	X							
MS-LS4-4. Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment.	X							

MS-LS4-5. Gather and synthesize information about the technologies that have changed the way humans influence the inheritance of desired traits in organisms.	X							
MS-ESS3-1. Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.	X							
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.		X		X				X
4-ESS2-2. Analyze and interpret data from maps to describe patterns of Earth's features.		X					X	X
MS-LS2-4. Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.	X		X		X	X		X
MS-ETS1-1. Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.		X		X	X			
MS-LS2-3. Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.			X	X				
MS-ESS3-3. Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.			X	X	X	X		X
MS-LS2-5. Evaluate competing design solutions for maintaining biodiversity and ecosystem services.			X	X				

4-ESS2-1. Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.			X	X				X
MS-ESS2-2. Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.						X		
MS-ETS1-2. Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.						X	X	
MS-PS1-2. Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.							X	
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.							X	
MS-ETS1-3. Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.							X	

9. Bioaccumulation and the Great Lakes Ecosystem				
	X			
	X			

X
X

x
x

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