



## Clinton County Department of Waste Management

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## Clinton County K-12 Environmental Education Programs & Michigan Grade Level Education Content Standards

The Clinton County Department of Waste Management (DWM) is pleased to offer a variety of environmental education programming free of charge to area K-12 educators. This document provides a description of the resources available, as well as the Michigan Education Content Standards correlations for each grade level by core programs offered. For more information, to schedule a program or develop a unique program to meet a specific need, please contact Environmental Educator Kathleen Donahue at 989-224-5177 or [donahuek@clinton-county.org](mailto:donahuek@clinton-county.org)

*The Clinton County DWM seeks to connect youth to the natural environment to build awareness of critical issues and motivate conservation-minded behaviors such as waste reduction, reuse, recycling, composting, and saving natural resources used for energy and fuel. It is hoped that by making curriculum resources readily available, educators can easily access programming that not only meets state education standards but exposes youth to key environmental issues in ways that inspire positive behavior change.*

### **Core Program Descriptions**

#### **Keeping the Earth Healthy: The Hidden Life of Decomposers**

“Discover how you can help keep the earth healthy by becoming a part of one of the Earth’s natural cycles using composting worms. Check out the social life of the worm, their daily workout routine, their world-wide journeys and how they use their secret weapon to keep birds from eating them. Observe live worms and learn how to keep a healthy worm bin to compost kitchen waste generated at home.”

*Information and activities adjusted for different grade levels*

#### **The Incredible Story of Paper**

“Explore how ancient wars developed the science of papermaking. How did written language influence world history? What is the connection between the spread of the Black Plague through Europe and papermaking? How is paper made and why do we reuse and recycle it? Calculate the savings in energy and trees we create by using recycled paper products. You’ll be astounded at the number of products we use everyday that contain paper! Make your own paper and discover how creative you can get with this ancient craft!” *Information and activities adjusted for different grade levels*

#### **Re-Thinking our Lifestyle: Recycling**

“Explore how we fit into the Earth’s natural cycles when we design, create, use and recycle products. With local items that we use every day, discover the “behind the scenes” stories of everything from paper, cans, glass, oil and plastic to tennis shoe recycling. Discuss how our actions directly relate to the quality of life we enjoy on Planet Earth.”

## **Climate Change – A Virtual Field Trip to the Arctic**

“Take a virtual field trip to Churchill, Canada to explore the issues of climate change. Hear and see first hand descriptions of melting glaciers from leading scientists, track the melting ice through the ages and explore the correlation with rising greenhouse gases. Discover the devastating effect climate change has had on the survival of arctic animals such as polar bears and seals. Learn what you can do to develop a sustainable lifestyle to not only save the arctic glaciers and the animals that depend on them but to make the earth’s environment sustainable for future generations.”

## **The Price We Pay: Using Plastics and Discovering Alternatives**

“We drink out of them, eat off of them, sit on them and even drive in them. They are durable, lightweight, and can be made into virtually anything. But it is these very useful properties of plastic which make them harmful to both humans and the natural environment around us. Discover the behind-the-scenes issues, economics and politics and explore ways that we can learn to live with plastics and alternatives that we can use everyday to decrease their impact.”

## **Wildlife Rehabilitation**

“Using live animals that are not able to be released from the Wildside Rehabilitation and Education Center in Eaton Rapids, MI, this program provides a description of rehabilitation activities, reasons more rehabilitators are needed, and what wildlife rehabilitation involves. YOU play the most significant role in protecting wildlife! As you grow to understand your wild neighbors, preventing situations that put animals at risk becomes simple. Knowing a few basic things about the wildlife in your neighborhood can both save your animal friends and help others who need advice. Here’s your chance to be the local wildlife expert, and help future generations to enjoy these remarkable creatures!”

## **Nature Studies**

“These outdoor and in-the-field programs can take many forms from scavenger hunts in the woods to tree identification, pond macro-invertebrate or microscopic animal life, field insects, life under a log, bird or wildflower identification investigations. Each program is individually designed to meet the needs of the teacher and is dependent on the environmental conditions where the field study is conducted. Binoculars, field journals, microscopes, and magnifying glasses are utilized to enhance this interactive hands-on experience. Programs can be done in your school-yard, nature center or state park.”

## **Green Design**

“What do we really need for a fulfilling life? How do we define well-being? How do the products we use every day impact our environment? What is your ecological footprint? What are renewable resources and how can we create products that will stay within the earth’s natural cycles to make our lifestyles sustainable? This hands-on program is an introduction to the science and economics of green design and social justice issues and involves small group discussion, problem solving and the creation of new product ideas. It can be easily expanded into a 1-2 week focus project.”

## Low Dose Makes the Poison

“When toxicologists at the Food and Drug Administration or the Environmental Protection Agency test a chemical's safety, they typically use high doses to find health problems. But that approach has missed the potential dangers of some substances that can be hazardous in tiny amounts. They're known as endocrine disruptors because they mimic or block hormones. Some, like bisphenol A, and phthalates, are common ingredients in plastics, personal care products and other consumer items. Learn how to identify these products and discover healthy alternatives for every day use.”

## Clinton County DWM Core Programs & Grade Level Expectations Covered

The following summarizes grade level expectations fulfilled by the programs described above. A detailed listing of content standards covered by these programs begins on Page 5.

PROGRAMS	GRADE									
	K	1	2	3	4	5	6	7	8	High School
Decomposers	X	X	X	X	X					
Paper	X	X	X	X	X					
Recycling	X	X	X	X	X					
Nature Study	X	X	X	X	X	X	X	X	X*	X
Animal Rehab				X	X	X	X	X	X*	X
Climate Change					X	X	X	X	X*	X
Plastics					X	X	X	X	X*	X
Low Dose Makes the Poison					X	X	X	X	X*	X
Green Design						X	X	X	X*	X

\* Grade 8 science standards not available. Programs address many subjects covered in different content areas.

## Additional Programs and Lending Resources Available

Clinton County DWM can work with educators to develop individual programming on an “as needed” basis. A number of resources are available for lending to enhance programs and curriculum. Assistance is also available for projects and activities such as: rain, butterfly & community garden development, outdoor activities, nature walks, geocaching, outdoor scavenger hunts, pond explorations, water testing, nature photography, tree planting and just about any outdoor environmental education activity!

## Environmental Education Curricula & Materials

The following environmental education curricula & materials are available for teachers to borrow to develop their own classroom programming. These are already correlated to Michigan Grade Level Content Standards as follows:

- Closing the Loop – Integrated Waste Management Activities at School and Home (K-12)
- Counting On People – Elementary Population and Environmental Activities (K-5)
- Educators and Recycling: Resources (K-12)
- EPA Teachers Guide to Reducing, Reusing, and Recycling (K-12)
- Friends Involved in Sport Fishing Heritage - Project FISH (K-12)

- Glass Packaging Institute (K-12)
- Leopold Education Project – LEP (K-12)
- Michigan Environmental Education Curriculum Support – MEECS
  - Land Use (Grades 4-5)
  - Ecosystems & Biodiversity (Grades 4-6)
  - Water Quality (Grades 6-8)
  - Air Quality (Grades 7-9)
  - Energy Resources (Grades 7-9)
- Product Life Cycles – The Science and Economics of “Green Design” (Middle School)
- Project Learning Tree – PLT (pre-school, K-12)
- Project WILD - Wildlife Focused Conservation Education Program (pre-school, K-12)
- Smart Consumers – Explores Consumer Issues and the Environment (grade 4-12)
- Waste Information Series for Education – WISE (K-12)
- Water Education for Teachers - Project WET (K-12)
- Wonders of Wetlands – WOW (K-12)

**Michigan Grade Level Education Content Standards Correlated to Core DWM Programs**

<b>Grade Level</b>	<b>Program</b>	<b>K-7 Science Standards</b>		<b>K-8 Social Studies Standards</b>	
Kindergarten	Decomposers	S.IA.00.12-14 S.IP.00.11-14	L.OL.00.11-12	K – G5.0.1	K – C2.0.2
	Paper	S.IA.00.12-14	S.IP.00.11-14	K – G5.0.1	K – C2.0.2
	Recycling	S.IA.00.12-14	S.IP.00.11-14	K – G5.0.1	K – C2.0.2
	Nature Study	S.IA.00.12-.14 L.OL.00.11-.12	S.IP.00.11-.14		
Grade 1	Decomposers	S.IA.01.12-14 S.IP.01.11-14	L.OL.01.13, 21	1 – G5.0.1	1 – E1.0.3
	Paper	S.IA.01.12-14	S.IP.01.11-14	1 – G5.0.1	1 – E1.0.3
	Recycling	S.IA.01.12-14	S.IP.01.11-.14	1 – G5.0.1	1 – E1.0.3
	Nature Study	S.IA.01.12-1.14	S.IP.01.11-1.14		
Grade 2	Decomposers	S.IA.02.12-14	S.IP.02.11-14	2 – G5.0.1	
	Paper	S.IA.02.12-14	S.IP.02.11-14	2 – G4.0.1 2- G5.0.1-2	2 – E1.0.4
	Recycling	S.IA.02.12-14	S.IP.02.11-14	2 – G5.0.1-.02 2 – G4.0.1	2 – E1.0.4
	Nature Study	S.IA.02.12-2.14	S.IP.02.11-2.14		
Grade 3	Decomposers	S.IA.03.12-13 S.IP.03.11-14 L.OL.03.32, 42	L.EV.03.12 E.ES.03.51-52	3 – G5.0.1-.2	
	Paper	S.IA.03.12-13 S.IP.03.11-14	E.ES.03.41-44, 51-52	3 – G4.0.1 3 – G5.0.1-.2	
	Recycling	S.IA.03.12-.13 S.IP.03.11-.14 E.ES.03.41-.44, .51-.52		3 – G4.0.1	3 – G5.0.1-.02
	Wildlife Rehabilitation	S.IA.03.12-.13 S.IP.03.11-.14	L.OL.03.32, 03.42 L.EV.03.12		
	Nature Study	S.IA.03.12-3.13 S.IP.03.11-3.14	L.OL.03.31-3.32, 03.42 L.EV.03.12		
Grade 4	Decomposers	S.IA.04.12-13 S.IP.04.11-14 S.RS.04.18	L.OL.04.16 L.EC.04.11, 21		
	Paper	S.IA.04.12-13 S.IP.04.11-14	S.RS.04.18	4 – P3.1.1 4 – G5.0.1	4 – H3.0.8
	Recycling	S.IA.04.12-13 S.IP.04.11-14	S.RS.04.18	4 – H3.0.8 4 – G5.0.1	4 – P3.1.1

Grade Level	Program	Geography Standards	Biology Standards	Earth Science Standards	Grade Level
	Climate Change (Arctic Virtual Field Trip)	S.IA.04.12-13 S.IP.04.11-14 S.RS.04.18	L.OL.04.16 L.EC.04.11, 21		
	Plastics	S.IA.04.12-13 S.IP.04.11-14	S.RS.04.18		
	Low Dose Makes the Poison	S.IA.04.12-13 S.IP.04.11-14	S.RS.04.18		
	Wildlife Rehabilitation	S.IA.04.12-.13 S.IP.04.11-.14	L.OL.04.16 L.EC.04.11, .21		
	Nature Study	S.IA.04.12-4.13 S.IP.04.11-4.14	L.OL.04.15-4.16 L.EC.04.11, 04.21		
Grade 5	Climate Change (Arctic Virtual Field Trip)	S.IA.05.12-13 L.EV.05.11-12	S.IP.05.12-13 L.OL.05.41-42		
	Plastics	S.IA.05.12-13	S.IP.05.12-13		
	Low Dose Makes the Poison	S.IA.05.12-13	S.IP.05.12-13		
	Wildlife Rehabilitation	S.IA.05.12-.13 S.IP.05.12-.13	L.OL.05.41-.42 L.EV.05.11-.12		
	Nature Study	S.IA.05.12-05.13 S.IP.05.12-05.13	L.OL.05.41-05.42 L.EV.05.11-05.12		
Grade 6	Climate Change (Arctic Virtual Field Trip)	S.IP.06.11-12 L.EC.06.21-6.23	L.EC.06.41-6.42 L.OL.06.51-.52	6 – G2.2.2 6 -G5.1.11.3, 2.1	6 – G3.2.2
	Plastics	S.IP.06.11-12 L.OL.06.51-52	L.EC.06.21-.23, 06.41-.42	6 – G2.2.2 6 – G5.1.1-1.3, 2.1	6 – G3.2.2
	Low Dose Makes the Poison	S.IP.06.11-12 L.OL.06.51-52	L.EC.06.21-.23, 06.41-.42	6 – G2.2.2 6 – G5.1.1-1.3, 2.1	6 – G3.2.2
	Wildlife Rehabilitation	S.IP.06.11-.12 L.OL.06.51-.52	L.EC.06.21-.23, .41-.42		
	Nature Study	S.IP.06.11 L.OL.06.51-06.52	L.EC.06.21-06.23 L.EC.06.41-06.42		
Grade 7	Climate Change (Arctic Virtual Field Trip)	S.IP.07.11 S.IA.07.12	E.ES.07.41-42 E.ES.07.71, 07.73	7 – G4.4.1	7 – G5.1.1-1.3
	Plastics	S.IP.07.11-.12	E.ES.07.41-.42	7 – G4.4.1	7 – G5.1.1-1.3

<b>Grade Level</b>	<b>Program</b>	<b>Geography Standards</b>	<b>Biology Standards</b>	<b>Earth Science Standards</b>	<b>Grade Level</b>
	Low Dose Makes the Poison	S.IP.07.11-.12	E.ES.07.41-.42	7 – G4.4.1	7 – G5.1.1-1.3
	Wildlife Rehabilitation	S.IP.07.11-.12 E.ES.07.41-.42			
	Nature Study				
Grade 8	Climate Change (Arctic Virtual Field Trip)	Science Standards not Available			
	Plastics	Science Standards not Available			
	Low Dose Makes the Poison	Science Standards not Available			
	Wildlife Rehabilitation	Science Standards not Available			
	Nature Study	Science Standards not Available			
High School	Climate Change (Arctic Virtual Field Trip)	G3, G5 & G6 standards	B3 standards	E1 & E2 standards	
	Plastics	G3, G5 & G6 standards	B3 standards	E1 & E2 standards	
	Low Dose Makes the Poison	G3, G5 & G6 standards	B3 standards	E1 & E2 standards	
	Wildlife Rehabilitation		B3 standards		
	Nature Study		B3 standards		