



CREED

Curriculum Resources for
Environmental Education Development

Fall 2016



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A Letter from Ann

As a mother, I attempt to write monthly letters to my children to report what is happening in their lives at that particular time. For some reason, getting started on today's reflections for this month's newsletter was difficult for me - until I thought of it like one of those letters. However, let it be known that I'd really rather be outside and active instead of writing. But here goes!

Dear EEAI Member,

You have so many impressive things going on this fall. Normally, this would be the time we would all be attending and participating in the EEAI conference. Yet, this year we opted to hold our annual conference in June to coincide with the bicentennial land deeding ceremony held at the Children of Indiana Nature Park. Were you aware that each child in Indiana is to receive a deed to a portion of this park? If you haven't received your's yet, check out the following website to request one: <http://www.ilovemyland.org>.

Though we are not hosting a fall conference, there are so many other opportunities for us to get together. One example is the Indiana Children and Nature (ICAN) project, known affectionately as the *Swarm into Nature Play*. Please consider joining us on November 4th at Conner Prairie to learn more ways to "bee" involved with ICAN. See <http://www.IndianaChildrenandNature.org> for more information.

And of course, I know you haven't forgotten about the Environmental Literacy Guidelines (ELG) project of EEAI. Plans are in place to meet with a representative of the Indiana Department of Education (IDOE) and to connect with NAAEE through a webinar - all about moving the guidelines along into a statewide plan that would enable each citizen to be environmentally literate. We can always use more help, so if you are interested in joining us please email me at ann.niednagel@gmail.com.

I am sure there is even more going on, and some events are found in this newsletter. If you would like to share what you are doing and have it included in future newsletters, let Terri Hebert know. Her email is thebert@iusb.edu. And check out our website for more information on EEAI-related topics at <http://www.eeai.org>.

But for today, the sun is shining and it isn't 90 degrees. So I think I need to go outside and enjoy it! I hope you do the same.

Ann

P.S. My attempts at writing monthly letters to my children resulted in quarterly or biannual letters. Let's just say it's been really good weather!

Indiana Envirothon 2016 Updates: Darci Zolman

Indiana Envirothon appreciates the support of the Environmental Education Association of Indiana for this amazing opportunity for high school students. The North America contest was held in July in Ontario, Canada and Indiana sent its state winning team from Kankakee Valley High School. “We are so proud of how our Kankakee Valley FFA team represented Indiana at the North America Envirothon contest recently,” stated Indiana Envirothon President Darci Zolman. “They had a great experience!”



KANKAKEE VALLEY FFA (LEFT TO RIGHT): MEGAN GROEN, KAYLA GROEN, CHEYANN ODLE, EDDIE JEFFERSON, AND BRYAN SIPKEMA

Description of the North American Envirothon from the Kankakee Valley FFA

Kankakee Valley FFA members: Kayla Groen, Megan Groen, Eddie Jefferson, Cheyann Odle and Bryan Sipkema competed in the North American Envirothon at Trent University located near Peterborough in Ontario, Canada from July 24th to July 29th, 2016.

It's a five day environmental educational competition for teams that have won their State or Province Event. More than 250 teams students from 52 States, Provinces and China took part. They put their knowledge of

environmental science and natural resource management to the test, taking written exams in five areas: soils, aquatics, wildlife, forestry and invasive species.

This year's North American Envirothon host was Forests of Ontario, a charity that focuses on tree planting and forest education programs. The Executive Director of Forests of Ontario, Jessica Kaknevicus said, "The overall goal is to expose students to careers in the natural resources, to build skills and really build teamwork among students that are passionate about the environment."

Each student from Kankakee Valley FFA team specialized in one or two areas to help focus on study materials. Kayla Groen specialty was forestry and invasive species, Megan Groen specialty was wildlife, Eddie Jefferson specialty was soils, Cheyann Odle specialty was aquatics, and Bryan Sipkema specialty was invasive species. Besides the written exams, team members had 6 hour and 45 minutes to put together a 20 minute presentation on the invasive species, Silver Carp.

Winning the overall North American Envirothon Competition was the Providence of Ontario. Members of the Kankakee Valley FFA, who attended the North American Envirothon enjoyed stopping at Niagara Falls, team building activities, hands-on environmental skills, and meeting students from across North American and China.

Kankakee Valley FFA Chapter Advisor, Steve Inman, was pleased with the positive performance of Kankakee Valley's State Winning Team. "Every team member from the Kankakee Valley FFA did their best to represent Indiana at the North American Envirothon."

Paul-itics: Reflections from a Seventh Grade Teacher: Paul Steury



After my annual fantastic time at the EEAI conference, I jumped into a sub-compact rental car to help save the world! By saving the world, I mean I went to the Citizen's Climate Lobby annual conference in Washington created to inspire and spark the political will for climate solutions. This is done by getting volunteer lobbyists to Capitol Hill to have civil dialogue with our representatives.

I talked with my Representative, Jackie Walorski, about the solar panels on her barn, about how she says you can't trust China's numbers when it comes to them creating solar and wind farms, and about me asking her to join the bipartisan climate caucus. She said she would think about all of it. I didn't hit her over the head and I didn't protest outside her door. I didn't yell. Instead, I scheduled an appointment and sat down to talk.

Lobbying, to me, is education plus an ask. It's supposed to be non-biased...

Citizens' Climate Lobby (CCL) <https://citizensclimatelobby.org> is a non-profit, non-partisan, grassroots advocacy organization focused on national policies to address climate change. CCL's goal is single minded: Fee and Dividend. But what does that mean?

They want to place a steadily rising fee on fossil fuels, specifically coal, oil, and gas. Then they give 100% of the net fees back to households each month, which adds up to approximately \$200 per household. This extra money can be spent on anything: solar panels, groceries, bills. The payment is a charge on the fossil fuel industry for putting CO₂ into the atmosphere.

To make sure corporations don't run away to countries with lower regulations, CCL suggests using a border adjustment which discourages this type of action while encouraging other nations to adopt equivalent prices on carbon. Together, the import tax and refund on exports are called the "Border Adjustment".

Back to the rental car. You may ask why did I opt for this mode of transportation. I thought a sub-compact would be the perfect choice for someone not wanting to put too much CO₂ into the air.

These are the numbers related to this story problem:

Miles from Richmond to Washington, DC - 524

Miles from Washington DC to Goshen - 591

Total round trip miles - 1115

Pounds of carbon dioxide per gallon of gasoline - 19.64

Average miles per gallon for the rental Mitsubishi Mirage - 42

So, how much CO₂ did I put into the air?

1115 miles divided by 42 mpg = 27 total gallons of gas used

27 divided by 19.64 pounds of CO₂ = 530 pounds of CO₂ put into the atmosphere to attend a conference on climate change.

You may be wondering what would be the numbers if I had flown. Great question!

One air mile produces 53.3 pounds of carbon dioxide. It's 503 miles to fly a plane from South Bend to Washington DC, which equals to 1006 miles round trip. That translates into 53,620 pounds of CO₂ per flight. A Boeing 737 plane can hold 125 passengers plus 10 staff members. If you take the 53,620 pounds of CO₂ divided by the 135 people, it makes only 397 pounds of CO₂ per person.

So, based on these numbers, I made the wrong decision. Hind sight is always better, someone says, and I have to agree! I guess for future decisions, I should weight everything.

I told my seventh graders over and over again, think about the ramifications of your choices. Think dagnabit!

The primary question is this: Am I justified to go to a climate change conference while putting CO₂ into the air? Especially if I carpool? Anyone want to go with me next year?

Invasives and Climate Change (Notes taken by Natalie Haley, EEAI Director-at-Large)



Charles Darwin claimed that the number of plants moving in (immigration) equals the number of things going extinct (or emigration). Mr. Thomas J. Stohlgren of the U.S. Geological Survey, questioned whether an increase in species diversity of natives will cause a decrease in invasive plants. He found that an increase in light, nitrogen and water made a good habitat for both native and invasive plants. In other words, the more native species, the more invasive plants as they both like the same habitat. Today the ration of immigration (plants moving in) to emigration (plants moving out) is not equal but is at a 32:5:1 ratio.

The problem with invasive species management is that the response to removing invasive plants from an area is reactive and not proactive. Restoration areas need GPS or global positioning system surveys which allow managers to focus on restoring the areas where it will be most effective. Find out where the hot spots of invasion are and have watch lists. If you can, GPS where they are on your property. Check into the National Ecologic Observation Network at <http://www.neonscience.org> which captures movements of species. The National Institute of Statistical Sciences or <http://www.niss.org> has living maps of invasive species. The key is in understanding that the more aggressive invasive species need to be managed before the more dominant species. In our park that would be equivalent to focusing on the Japanese Knotwood in the Yohne Road ditch before eradicating our

many acres of bush honeysuckle.

EEAI Conference (Bernadette deLeon)

Seeing the Forest and the Trees: Waycross Conference Center, Scenic Brown County - October 13th-15th



Has teaching sapped your energy? Do the budding sprouts in your care stare at you with wooden expressions, while you are "board" out of your mind? Sycamore of the same old, same old? Pining to get away?

Tap into the energy of EEAI! Rooted in the Environmental Literacy Plan (ELP), what transpires at the 2017 conference will help you branch out. Seek the light and discover your preconceptions falling away as we revisit evergreen topics and nurture new ideas. Don't bark up the wrong tree - plant the seed, and mark your calendar now as we graft a forest of activities for you to transplant to our own plot. It's simple, arbor no doubts - blossom with us in 2017! Yew'd be nuts not to.

One Man's Perspective - Needles of Truth in a Haystack: Submitted by Sam Carman

"Crisis" is a word that is sometimes used to arouse emotion at the expense of reason. As a rebellious, anti-establishment college student in the early 1970s, I was certainly taken in by the rhetoric. After reading the very popular book written in 1968 by respected Stanford University

biologist, Dr. Paul Ehrlich, *The Population Bomb*, I was convinced that our planet was doomed within my lifetime. After all, Dr. Ehrlich said that the battle to feed all of humanity is over. He forecasted that hundreds of millions would starve to death in the 1970s, that 65 million of them would be Americans, and that England would likely not exist in the year 2000. In 1970, he warned that within the next 15 years there would be an utter breakdown of the capacity of the planet to support humanity.

You may have noticed that England is still with us. Hundreds of millions did not die of starvation in the 1970s, and humanity has managed to hang on, even though the planet's population now exceeds 7.3 billion - more than twice what it was when the book was published.

Because of sensational predictions like these, by Ehrlich and others, the entire environmental movement came under suspicion. Unfortunately, emotional appeals still garner media attention and are the tools of choice for some. With the miracle of the Internet, any half-baked opinion can be dressed up like a fact and paraded before an immediate worldwide audience.

We've all been duped by environmental zealots; or at least have drawn some inaccurate conclusions based on misinformation or partial information. And please don't misunderstand - I'm not saying all environmentalists are intentionally leading us astray. I consider myself an environmentalist, and the vast majority of us are people who care deeply about the earth and its resources and want to do what's right. But folks, these are extremely complex issues that don't have black and white answers - the truth almost always lies in a gray area where even scientists sometimes disagree.

And yet, in today's society, simple answers are exactly what people demand. We live in a sound bite world, and attention span is now an oxymoron. Among many, there is an intrinsic paranoia that government always lies and scientists are trying to fool us with numbers and data. Beliefs are often guided by ideology and comfort instead of intellectual honesty and integrity; where people are willing to accept statements they agree with and reject those they don't - without verification.

I recently gave a presentation on this topic at my church. I am a Unitarian Universalist, and our 7th principle is to respect the interdependent web of all existence, of which we are a part. When I began developing my presentation, I thought my message would center upon this principle. But

as it turned out, it wasn't so much about our 7th principle as it was about our 4th principle that calls for a responsible search for truth and meaning. Now, I've always interpreted our 4th principle as referring to the search for religious truth and meaning, but it really encompasses much more than that. Respecting the interdependent web of all existence (i.e., being an environmentalist) is absolutely dependent upon first doing the hard work of uncovering the truth based on current science. And I'm not saying that "truth" won't change - most scientists in the Middle Ages believed the earth was flat, the sun circled the earth, and some forms of life spontaneously generated. The best we can do is verify our sources of information and base our reality on the most current scientific data and theory.

By the way, don't believe everything you read, even if it's written by a self-proclaimed environmentalist. One of those examples from the Middle Ages I just cited isn't actually true. Do you know which one?
