

# Porter County Career and Technical Education News

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Career and Technical Education

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*"Our job includes making a profound difference in the lives of our students!"*

PORTER COUNTY  
Career and Technical Education

TAKE ON THE WORLD

## Wind Generator Donation

Midwest Wind and Solar will be donating another wind generator to our rapidly growing alternative energy demonstration project. Approximate output of the generator will be 40 kWh per month. This turbine is designed to be mounted on residential roofs, boats, or remote cottages. They operate best when there are no wind obstructions in the area. They are engineered to charge batteries and deliver energy to locations not connected to the grid. Our students will conduct studies to compare this commercially engineered product with the two wind turbines engineered and built by our Machine Trades students. Many thanks to Midwest Wind and Solar LLC President, **Kevin Moore** for this generous donation.



Electronic students will start on the installation of an expanded solar farm on our school rooftop very soon after school starts this Fall. Our new solar array will be selling electricity back to Nipsco on what is called the Feed-In tariff program. Our new photovoltaic panels will be installed by our students (with guidance from Midwest Wind and Solar, our local contractor), and monitored, and maintained by our Electronics and Computer Technology class under the guidance of instructor, Mr. Dave Kenning. Our expanded capacity will generate between 5-10 kWh/yr. This will have a positive environmental impact equivalent to planting 280 trees or reducing driving by 112,000 miles. Over the life of the system, we will eliminate 56 tons of carbon dioxide from the earth's atmosphere.

We are the first Career Center in Indiana, out of 49 vocational districts in Indiana, to develop a green technology program and to focus on developing an experimental alternative energy project. Our goal is to reduce our energy footprint as much as possible, save money, and to test the viability of wind, solar, and energy conservation. Our project is student engineered, student built, student installed, and student maintained.



We developed an interdisciplinary team to investigate alternative energy with the idea of developing a demonstration project that would generate free electricity to power a computer station and a display case. We built the first wind generator, under Mr. Carmack's direction, to be approved for residential placement in Valparaiso after going through the city planning commission, the city alternative energy advisory committee, and the building inspector. We were the first entity in Valparaiso to request permission to install a wind generator in the city limits. Our horizontal axis wind generator is the first student built wind generator placed on a secondary school roof in Indiana (to the best of my knowledge).

We also added solar power to our alternative energy demonstration project to do a comparison study between wind and solar. A weather station was added to collect data on weather and its relationship to power generation. An infrared video camera was added to provide for 24 hour monitoring. A robotic solar tracker was built to provide more comparative data between static

photovoltaic panels and the solar tracker which automatically keeps the solar panels perpendicular to the sun's rays. An additional wind generator, on a vertical axis is nearly complete. A major addition to the alternative energy project will be an additional 32 solar panels to be added within the next few months. Our project success encouraged us to also explore energy conservation through the replacement of fluorescent bulbs with LED lighting and by installing motion detectors and other energy saving devices. All of these electrical modifications were installed by high school students. This project has spawned additional innovation in recycling, energy consciousness, paper reduction, and limiting electrical consumption without negatively affecting instruction. We think our project may be a model for other schools looking for a contemporary curriculum that will also save money in a time of diminishing funds. Note: this summer with most of Valparaiso suffering from a power outage, our hallway lights were operating throughout the day using stored solar and wind power.

### **Meet Renee' Tripp**

Renee' Tripp is our new Early Childhood Education teacher located at SELF School. Renee' brings outstanding credentials to the position to include an Elementary Education teaching license, eight years teaching 1<sup>st</sup>-3<sup>rd</sup> grade, a Masters Degree from Purdue, local substitute teaching experience, and several years teaching at a preschool. Renee' is most proud of raising three boys. She and her husband operate a daily farm operation specializing in alpaca production. Her goal includes helping her students grow into productive and happy citizens.



## Senator Ed Charbonneau Visited the Career Center last Spring to help Students Plan their Futures in Health Careers

Senator Ed Charbonneau offered to speak to our Health Occupations students toward the end of the last school year, in order to help them decide their post-secondary path in the health care world. Sen. Charbonneau, as former President of Memorial Health Systems, shared his appreciation for the health career area with our students and talked with them about the many paths they could take to productive, meaningful careers helping



others be healthy. Our students and Senator Charbonneau enjoyed the interchange of ideas.



The Three Rules of Life described by retired Notre Dame football coach, **Lou Holtz**:

- 1) *Do what is right,*
- 2) *Treat others as you wish to be treated, and*
- 3) *Do your best all the time.*

No one can go back and make a brand new start. However anyone can start from now and make a brand new ending...  
(author unknown)

### Calendar

- August 31, 8 am – 2 pm, American Red Cross Blood Drive hosted by Health Occupation Students, (Future Blood drives: November 2, February 1, and May 3)
- Sept 4, Tower Park Cleanup, part of Valparaiso’s New Adopt-a-Block program. Mrs. Commers students have the kickoff date for this monthly litter patrol
- Mayor Costas, Sept 7, 8 am, greeting students as they arrive and visiting our Alternative Energy project.
- Sept 17, Congressman Visclosky visiting from 745-845 greeting students as they arrive and observing our Alternative Energy project.
- September 20, 6-7 pm, Open House at the Career and Tech Center, 1005 N. Franklin Street, Valparaiso
- Hypnotist, Paul Knight, at the Career Center on October 12<sup>th</sup>.

### Our Newsletter

*Porter County Career and Technical Education News* is a newsletter for promoting the high achievement of our staff and students. Written contributions to the newsletter are always welcome. Most articles should be written in 100 words or less. Please fax (531-3173), call (531-3170), or email (jgroth@valpo.k12.in.us) with news to be published about you and your students.

It is the policy of the Porter County Career and Technical Education Program to comply with all state and federal regulations prohibiting discrimination on the basis of race, color, religion, sex, national origin, age or disability in enrollment procedures or access to programs.

[www.pccte.org](http://www.pccte.org)

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