

THE CATALYST

SLIPPERY ROCK WATERSHED COALITION MONTHLY ACTIVITIES UPDATE

NEXT MEETING: 7 pm on 1/10/19 at Jennings Environmental Education Center, pizza and pop provided.
December meeting was cancelled.

Student Symposium a Success!

On December 6th, the annual Student Symposium on the Environment was held at Westminster College, marking the 11th straight year the college has hosted the event. The purpose of the student symposium is to provide a venue for students to showcase their environment-related research, projects, internships, and artwork in a positive and friendly atmosphere. The student symposium arose from the annual Slippery Rock Watershed Coalition Symposium which began in 1996 where students (mostly from Slippery Rock University and Grove City College) and professionals were able to interact and present their research on to the watershed restoration activities of the SRWC. After several years, students were given their very own event and the symposium was expanded to include any environmental related topic.

After Dr. Helen Boylan and Westminster College began taking on the hosting and organizing responsibilities of the symposium, it has grown to become a regional event. This year's symposium attracted approximately seventy-three students from eight colleges and universities including Chatham University, Clarion University, Duquesne University, Geneva College, Indiana University of Pennsylvania, Slippery Rock University, University of Pittsburgh at Greensburg, and Westminster College. There were also several high school students from Central Valley High School and Greenville Senior High School. There were 26 posters and 7 oral presentations that ranged from ecological studies to microplastics to climate change; and of course what SRWC symposium would be complete without AMD and passive treatment projects?!

The quality of the work is always impressive and the judges have a daunting challenge of visiting and evaluating all of those posters! The following awards and honorable mentions were earned:

Environmental Research Poster

Hailey Tamaro won for "Influence of weather variables on timing of breeding in American kestrels."
 Rachel Dressler, Melanie Opyrchal, and Hannah McElrath received honorable mention for "Allelopathic effects of hay-scented fern (*Dennstaedtia punctilobula*) on pin oak germination and growth."

Environmental Project Poster

Katarina Lewis won for "Stress and exposure to imidacloprid- a neonicotinoid pesticide, affect host selection in *Nasonia vitripennis*."
 Lauren McNany and Courtney Kinkead received honorable mention for "Dewater Efficiency at the New Wilmington Wastewater Treatment Plant"



High School Presentation

Brian Ross and Trey Wilt won for "Acorn Parasite Preference."
 The Environmental Science AP Class from Central Valley High School received honorable mention for "A systems Approach to Implementing a Water-Bottle Recycling Program through Education, Regulation, and Enforcement."

Oral Presentation

Tia Kowalo, Andrew Kearney, Justin Anuszek, and Matthew Balczon for "Investigating microplastics in macroinvertebrates collected from the Little Neshannock Creek, using clean air processing techniques."
 Elizabeth Cochran received honorable mention for "Effects of constructed wetlands on heavy metal removal in abandoned mine drainage remediation."

Congratulation to all the students for a job well done! It has been another successful symposium and we look forward to next year's event, which will take place at Westminster College on Thursday December 5th, 2019, so save the date! We would like to see even greater participation from more schools!



Students from the Environmental Science Advanced Placement Class from Central Valley High School discussed their efforts to reduce single-use plastic bottles by encouraging students to buy refillable water bottles. Sales of the water bottles will be used to purchase water filling stations. They also instituted a recycling program to get students to recycle bottles instead of throwing them in the garbage.

Renewable News at Moraine State Park

On Friday, December 7th, students in Melissa Busler’s 7th grade science class at St. Luke Lutheran School were treated to a special guest speaker. **Natalie Simon**, an environmental education specialist at Moraine State Park and McConnells Mill State Park, visited the students to share some exciting news pertaining to renewable resources and Moraine State Park. The students had been learning about energy, including the 3 R’s (reduce, reuse, and recycle), and the pros and cons of fossil fuels and renewables. Mrs. Simon presented some super cool information about a brand new solar array installed at Moraine State Park at its new sewage treatment plant. The old sewage treatment plant had only about three pumps and was quite inefficient. The new plant just built is much more modern and efficient, with about a dozen pumps. However, with more pumps comes a higher electric cost to run the sewage treatment building. The electric cost jumped from \$11,000 per year to \$26,000 per year with the new system. So the PA DCNR (Department of Conservation and Natural Resources) provided some funding to the park to build a solar array. Over time, the solar array will make up the cost difference. Mrs. Simon explained how the array functions, and showed photos of its construction. She compared the photovoltaic cell process to what happens inside a plant cell, which uses sunlight to produce energy. She also explained how the solar panels had to be installed at a certain angle, roughly equivalent to the park’s latitude of 42 degrees, because the panels do not tip or rotate (that feature is a much higher cost). Students were excited at Mrs. Simon’s explanations of how families can set up their own simple solar system at home. Many students had recently experienced a long-lasting power outage due to a winter storm that brought freezing rain and downed power lines. Some students went for six days without any power at home, so the idea of going “off grid” and having their own independent power supply was mighty appealing!

Another exciting addition to Moraine State Park is an electric car charging station! Within a couple of months, there will be two fully operational electric car charging stations near the bike rental area at North Shore of Lake Arthur. It will be interesting to see how many park visitors drive to the lake in an electric car and make use of the new fueling area. Moraine State Park and McConnells Mill State Park certainly do get a lot of visitors... Mrs. Busler and her class were surprised when Mrs. Simon told them the estimated number of visitors to both parks combined in one year is two million people — roughly the same as the number of visitors to the Grand Canyon! We who live in western PA certainly are blessed to have two such amazing parks nearby to use for kayaking, swimming, fishing, hiking, biking, snowmobiling, disc golf, picnics, and so much more. There are 121 state parks in Pennsylvania, all offering something special and fun for families to enjoy. Even if it’s cold, try to get outside and enjoy the great outdoors!



The KIDS Catalyst

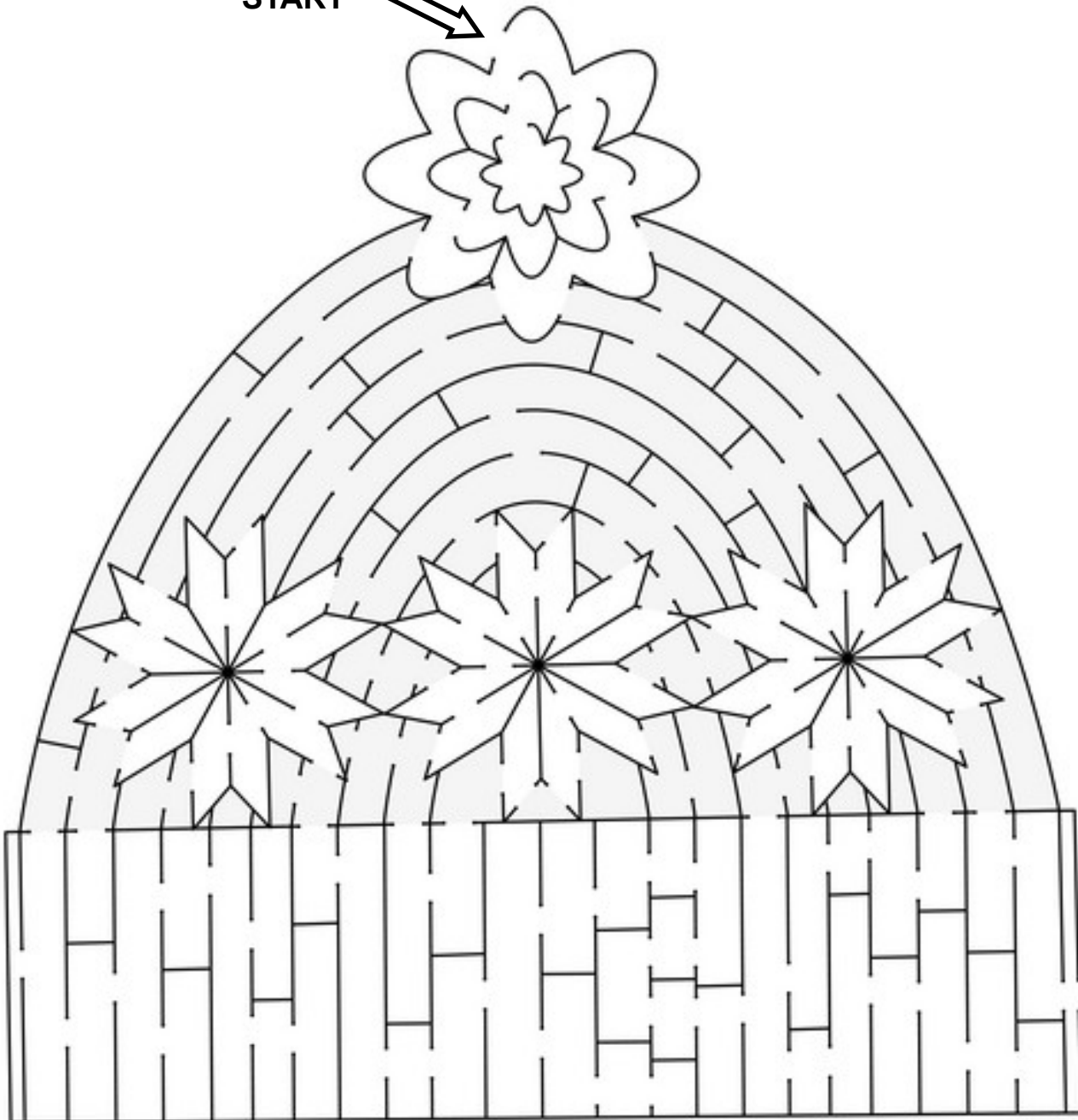
SLIPPERY ROCK WATERSHED COALITION FUN ACTIVITY



Wintertime Maze

BRRRRR!!!! Winter has arrived! If you're like many of us at the SRWC, even though it's cold out there, you still may like to go outside a lot! Winter hikes through the woods, ice skating, sledding, building snowmen or snow forts, good old-fashioned snowball battles — we love it all and hope you do, too! But when it's super cold outside, you have to bundle up to stay warm! Below is a winter hat maze for you to try. If you can find the correct path from Start to Finish, be sure to mail us your paper. If you do, we'll send you a \$1 credit to Amazon through a parent's email address! The credits can be saved up over time so you can buy something extra special. Happy winter!

START



FINISH

Name _____ Age ____ Parent email address: _____



Slippery Rock Watershed Coalition c/o Stream Restoration Incorporated
A PA Non-Profit Organization
434 Spring Street Ext.
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Volunteers Needed!

Data Logger volunteers are needed in the Slippery Rock and Boyers area! If you've been wanting to volunteer to help improve the watershed but haven't been sure how to get involved, this is an excellent opportunity to help in an easy but very much needed and valuable way! What exactly IS a Data Logger, you may ask? Data Loggers are compact, electronic devices with internal microprocessors, storage, and data sensors. They are used to monitor and record various environmental parameters. These awesome instruments of science can be programmed to take measurements of multiple water quality parameters (such as temperature and conductivity) set to record information at regular intervals, for up to years at a time, unattended. We are seeking volunteers interested in becoming "citizen scientists" who would download the water quality data from the Data Loggers from time to time so it can be analyzed. This information gives us an idea of the quantity of dissolved materials in the water to help ascertain the functioning of passive treatment systems and alert us to any problems or adjustments that may be needed.

Taking information from the Data Loggers is a short and simple process. An SRWC volunteer will provide anyone interested in helping with a quick and easy training session. After that, it's just a matter of visiting the sites (on a bi-monthly or quarterly basis) where the Data Loggers have been set up. A technical background is not necessary to help with the Data Loggers, and we hope to attract some new volunteers to help us out in this endeavor. Once trained, volunteers can collect the water quality data at their convenience. All that's needed is the ability to walk/hike a bit outdoors and a desire to help. It's a great learning opportunity that would also look good on a resume! If you are interested, please contact Shaun at 724-776-0161 or email sri@streamrestorationinc.org.



Kirk Brethauer and his daughter, Marina, download data from the data logger located in Slippery Rock Creek.