

THE CATALYST

SLIPPERY ROCK WATERSHED COALITION MONTHLY ACTIVITIES UPDATE

NEXT MEETING: 7 pm on 12/11/14 at Jennings Environmental Education Center, pizza and pop provided.
11/13/14 meeting attendance: C. Denholm, M. Dunn, B. Kuban, F. VanAtta, S. VanDerWal

Westminster College and SRWC Student Symposium Showcases Students' Research and Talents

It's that time of year again, time for another excellent Student Symposium!! On Thursday, December 4th Westminster College and the Slippery Rock Watershed Coalition (SRWC) sponsored an evening event to showcase environmental projects of students in our region. There has been a symposium every year since 1996 (hard to believe it's been 18 years?!) for local college students to present their research findings in areas such as soil science, watershed restoration, local environmental education, and other topics, to their peers, professors, and potential employers. Students also enjoyed time to network and make new contacts, as well as develop new friendships with students from other colleges and universities who share similar interests.

Held at the **McKelvey Campus Center at Westminster College**, this year's Symposium featured an excellent poster session time, impressive oral presentations, and informative science displays.

Special thanks goes out to **Stream Restoration Inc.** for sponsoring the awards given to the students.

Best Presentation award winners —

Oral Presentation:

Mara Sawdy (*Westminster College*) "Hydraulic Fracturing: The Potential Risks to Air Quality and Future Research Directions for the ALLARM Program"

Environmental Science Research Poster:

David Starr (*Westminster College*) "Effects of Butylated Hydroxytoluene on Zebrafish"

Environmental Project Poster:

Cody R. Michaels (*Westminster College*) "A Summer in Someone Else's Trash: Recycling Technician Internship"

Honorable Mention awards winners —

Oral Presentation:

Lance Jubic (*Westminster College*) "Closterium Moniliferum: A Candidate For The Remediation Of Water Contaminated By Hydraulic Fracturing"

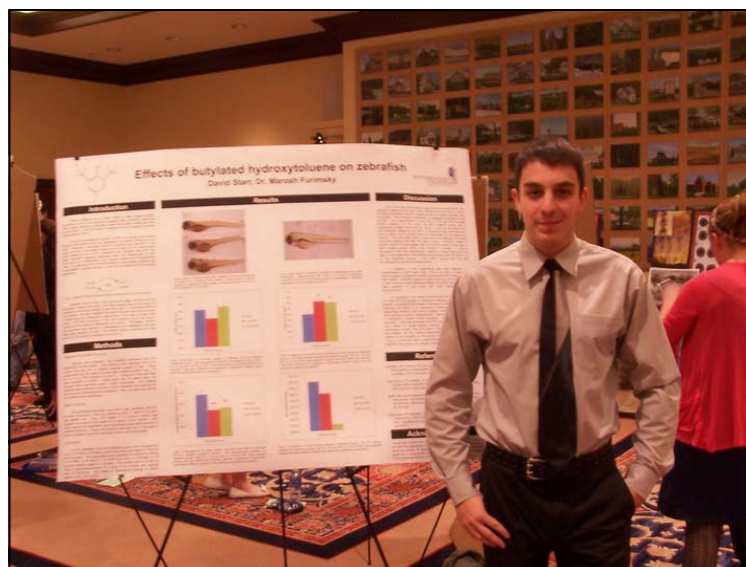
Environmental Science Research Poster:

Acacia Ferrese (*Westminster College*) "Evaluation Of Antimicrobial Activity Of Silk Dyed With Staghorn Sumac Extract"

Environmental Project Poster Presentation:

Adam Montowski and **Adam Cheatham** (*Westminster College*) "Analysis of Recycled Batteries and Westminster College's Recycling Program"

Congratulations to all of the winners! Thank you, thank you, thank you for all of your hard work and interest!!!





The winning Westminister College students stand for a photo at the Student Symposium on the Environment.

SRWC Participants Make Classroom Visits Fun and Educational!!

Students in **Mrs. Melissa Busler's** 7th grade Earth Science class were recently treated to not one, but two guest speakers from the **SRWC!** To supplement the students' studies in their unit about Energy and Resources, **Dan Guy** and **Shaun Busler** came to **St. Luke Lutheran School** in Cabot to share their expertise in these areas. On December 4, Dan visited with the 7th grade to teach them about natural gas. Dan had several years experience working for an energy company and was glad to share information about his involvement. Dan's talk covered topics such as natural gas use, location, composition and extraction, the process of setting up a drill pad, the Marcellus Shale Formation, the differences between horizontal and vertical drilling, and what his job was like. Dan shared video clips with the students to give them a visual of what hydraulic fracturing entails, and they were able to see the many safety precautions taken to protect groundwater from contamination during drilling. It was interesting to learn how new studies of groundwater and drinking water are finding methane present before any drilling occurs. Students had some great questions for Dan, ranging from public perception and misconceptions about fracking, to regulations in the industry, to how his new and old jobs compare to each other. Thanks so much for the visit, Dan!

One week later, on December 11, Shaun spoke to the students about abandoned mine drainage. He reviewed the past and current use of coal as an energy resource, as well as the effects of mine drainage on water in Butler County and around the world. Students learned the amount of PA streams impacted by AMD would stretch from Florida to Alaska, quite a big job to tackle! They also learned details about how the specific pollutants result in streams of different colors, such as iron from pyrite staining a streambed orange, while the presence of manganese creates blackish coloration, and aluminum makes streams appear white. Students saw photos of AMD from several countries around the world, as this is not just a local problem. Shaun's interesting PowerPoint included before-and-after photos from SRWC passive treatment systems, information about the quantity of metals the systems are removing from the streams, how aquatic life and habitats are improving, and how the metals are being collected and put to use as colorants in pottery and other items by Clean **Creek Products**. Students learned how passive systems work and some of the advantages of passive treatment systems. Shaun and student **Jack McCoy** did a fun demo using bleach and hydrogen peroxide to simulate the way chemicals can neutralize the AMD water and precipitate the metals. (See photo.)





The KIDS Catalyst

SLIPPERY ROCK WATERSHED COALITION FUN ACTIVITY



December Word Search

December is a fun month, and we hope you have fun doing this word search! Try to find all 24 words hidden in the puzzle below, and circle them. If you mail us your completed paper, we will send you a free gift certificate!

DECEMBER
WINTER
CHRISTMAS
COLD
SNOWSTORM
COOKIES

SNOWMAN
SLED
ICESKATES
SCARF
MITTENS
HOT CHOCOLATE

ICICLES
DECORATIONS
LIGHTS
PRESENTS
WREATH
STAR

REINDEER
VACATION
SNOWMAN
ANGEL
CANDYCANE
CAROLS

D	E	C	C	O	R	D	E	R	M	O	N	C	O	O	K	I	E	S	M	A	R	C
I	O	L	S	N	O	W	M	A	N	E	M	O	I	E	U	X	L	C	A	U	V	A
M	I	R	T	P	H	A	H	O	L	I	G	L	H	T	V	A	C	A	T	I	O	N
Y	U	S	N	O	I	T	A	R	O	C	E	D	L	E	T	I	D	R	G	R	E	D
E	M	T	E	Y	N	G	S	O	F	L	O	C	O	M	F	A	J	F	O	C	P	Y
M	R	A	S	R	A	K	R	E	S	C	L	I	G	H	T	S	C	H	I	A	S	C
B	O	W	E	Q	N	T	T	Z	N	S	T	W	A	M	A	N	G	W	C	R	Y	A
C	T	A	R	N	G	D	E	S	E	I	C	I	C	O	O	D	S	D	K	O	L	N
T	S	H	P	I	E	S	H	O	T	C	H	O	C	O	L	A	T	E	S	L	I	E
Y	W	M	C	O	L	M	M	A	T	N	D	T	H	A	Y	O	L	C	U	S	L	B
S	O	T	A	R	L	V	Q	U	I	X	K	P	O	J	E	B	A	E	R	V	E	P
O	N	L	C	H	R	I	S	T	M	A	S	W	R	E	A	S	C	M	H	R	I	S
T	S	L	O	E	R	E	D	A	S	A	N	V	I	U	O	R	L	B	A	S	N	O
V	I	O	T	L	L	E	Q	T	R	W	O	E	A	C	X	W	R	E	A	T	H	C
D	E	N	C	C	S	L	I	C	A	R	W	R	E	D	E	A	R	R	D	J	E	S
U	I	S	I	P	L	E	A	S	T	E	M	H	W	L	P	O	R	M	W	V	A	C
W	A	C	T	C	X	I	C	E	S	K	A	T	E	S	C	H	O	C	V	A	C	A
M	I	T	S	N	O	T	I	O	N	S	N	O	R	M	R	E	E	D	N	I	E	R

Name _____ Age _____ Address _____



Slippery Rock Watershed Coalition c/o Stream Restoration Incorporated
A PA Non-Profit Organization
434 Spring Street Ext.
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Add “Recycling” to Your Holiday Wish List!

‘Tis the season to recycle! We all seem to generate a lot of holiday trash each year, some of it unique to the holidays. Did you know things like wrapping paper, tissue paper, Christmas trees, Christmas cards, packing peanuts, and bubble wrap can be recycled? Check out the special information below on what, where, and how to recycle some of these seasonal items.

Christmas tree recycling/composting:

PLEASE NOTE THAT TREES MUST BE COMPLETELY FREE OF ALL TINSEL, FLOCKING, ETC.

Trees will be accepted at the following locations this year (call each site for program details):

Back to Nature – 840 Mercer Rd., Butler, PA 16001 (724) 287-7921 (free drop-off but pickup service is available for a fee, depending on mileage through Jan. 31, 2015)

Seneca Landfill – 421 Hartmann Rd., Evans City, PA 16033 (724) 625-9000 (drop-off only through Jan. 31, 2015 - \$5.00 fee – ask for directions when you enter site)

Slippery Rock Community Park – 320 N. Main St., Slippery Rock, PA 16057 (724) 794-8180 (free drop-off only through January 4, 2015)

Some communities may have a curbside pickup program – call your municipal building for details.

Wrapping Paper/Tissue Paper and Christmas cards: (Note: does not include cards or paper with foil)

1. Place in your curbside recycling bin where single-stream recycling is available. If you are not sure if you have single-stream, please call your waste/recycling hauler to find out.
2. Accepted in the green and yellow Paper Retriever bins around Butler County - to find a bin near you, access the web site www.paperretriever.com to search by zip code.

Packing Peanuts and Bubble Wrap: These are accepted by UPS Stores and can be donated to people who sell items on eBay.

Cardboard: Essentially any and all cardboard can be recycled! Place in your curbside recycling bin where single-stream recycling is available - if you are not sure if you have single-stream, please call your waste / recycling hauler to find out.