

BEING A MEMBER OF A CONSORTIUM:

An exponential effect in partnerships fostering and supporting student engagement, problem-solving skills, college preparation, and career exploration

Dr. Jeanette Schnars, Regional Science Consortium - Executive Director

Sarah Skelton, Iroquois School District - Gifted Coordinator



WHAT IS THE REGIONAL SCIENCE CONSORTIUM (RSC)?

- Located on the shores of Lake Erie, the RSC is a 501(c)3 non-profit organization facilitating research, education, and collaborations with RSC members. The RSC is not directly affiliated with an institution, but instead is a consortium of institutions seeking collaborations in scientific research. Organized in 2004, the RSC moved into the research wing of the Tom Ridge Environmental Center prior to its opening in May 2006. Since that time, the RSC has been an active part of the scientific research community fostering numerous collaborations on a variety of topics.
- The mission of the RSC is to promote and enhance our knowledge and understanding of the Lake Erie and Ohio River Basin ecosystems through research and education. The RSC accomplishes this by:
 - Facilitating collaborations among researchers, K-12 educators, and the community
 - Providing centralized facilities and equipment
 - Exchanging of scientific information through conferences, courses, workshops, and other public events
 - Offering educational opportunities for students, researchers, and teachers
 - Advancing the understanding of watershed-related issues
 - Focusing on Lake Erie and the tri-state region

- <http://www.regsciconsort.com/>



WHO IS THE RSC?

- Formed in February 2004
- Members
 - Colleges/Universities (13)
 - State and Federal Agencies (6)
 - School Districts (9)
 - Education/Outreach/Research Organizations (5)



WHERE IS THE RSC?

- Located on the Shores of Lake Erie, at the gateway to Presque Isle State Park
- Located in the Research Wing of the Tom Ridge Environmental Center (TREC)



THE RSC IS HOUSED IN TREC, BUT...

- The Regional Science Consortium is located at the Tom Ridge Environmental Center
- The TREC is a Commonwealth building, maintained and operated by the PA DCNR
- The RSC is an independent, non-profit collaborative organization housed in the Research Wing of TREC
- The RSC focuses on Research and Education in the region
- The RSC facilitates Research and Education with its 33 member organizations



THE RSC RESEARCH WING

Lab Space (7,000 sq. ft.)

- Cell Culture Lab
- Chemistry Lab
- Instrumentation Room
- Microscopy Lab
- Plant Lab
- Aquatics Lab
- Sample Prep Lab
- Mud Room
- Marina Field Station





THE RSC MEMBERSHIP

Full Members

- Allegheny College
- California University of PA
- Edinboro University of PA
- Fairview School District
- Fort LeBoeuf School District
- Gannon University
- Grove City College
- Harborcreek School District
- Indiana University of PA
- Iroquois School District
- Lake Erie College of Osteopathic Medicine
- Mercyhurst University
- Millcreek Township School District
- North East School District
- Penn State Erie
- PA Sea Grant
- PA Dept. Conservation and Natural Resources
- PA Dept. Environmental Protection
- PA Fish and Boat Commission

- School District of The City of Erie
- Slippery Rock University of PA
- Union City School District
- U.S. Geological Survey
- University of Pittsburgh – Bradford
- Warren School District

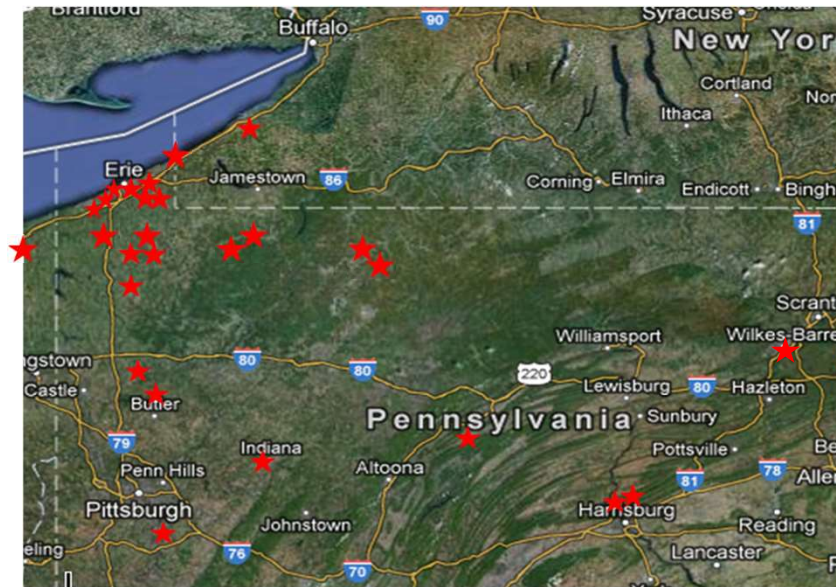
Associate Members

- Cleveland Museum of Natural History
- Erie County Dept. of Health
- State University of New York – Fredonia
- Wilkes University

Affiliate Members

- Barber National Institute
- Environment Erie
- Erie Bird Observatory
- Erie County Conservation District
- Purple Martin Conservation Association

THE RSC MEMBERSHIP



RSC MEMBER RESOURCES

- Lab and field equipment
- Grant opportunities
 - Research and Education
- Boat Opportunities - RSC Science (4), Environaut (20), Flagship Niagara (60)
- Natural History Museum Specimens and Herbarium
- Experiences on current research issues
- Interactions with researchers and experts in the field
- Customizable educational experiences to best benefit your students
- Big Green Screen Theatre (similar to IMAX)
 - Educational films with curriculum





Save the Date!

Regional Science Consortium's
2018-2019 school year

Member Events!

RSC College and Career Fair

October 18, 2018

High school students will have the opportunity to visit with college recruiters for information regarding admissions to their universities. The event will also include talks by college faculty on their research, and career professional on what they are looking for in new hires and a typical work day.

RSC 13th Annual Research Symposium

November 7-9, 2018

High School Students will have the opportunity to attend this conference to hear about the type of research being conducted by undergraduate and graduate students, and the potential to get involved with research at RSC member universities.

Forensic Science Escape Room

Jan 10, 2019 (High School)
Jan 17, 2019 (Middle School)
Jan 24, 2019 (Elementary)

Students will use presented information and conduct several scientific experiments to solve a mystery. Teams will work in groups of 4 to compete to be the first to *Escape the Room!*

RSC 3rd Annual Problem Solving Hack-a-Thon

February 7, 2019 (High School)
February 14, 2019 (Middle School)
February 28, 2019 (Elementary)

Students will work in teams from multiple schools to solve "The Challenge". Students will develop leadership skills and the ability to work in a team while experiencing hands on STEM education. The Challenge will be announced the day of the Hack-a-Thon.

College Prep Workshop Series

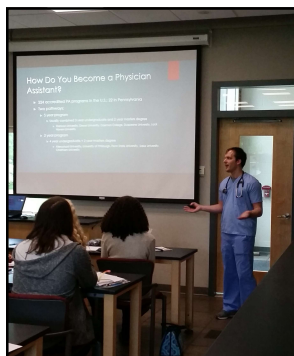
Selected High School students
September 25, 2018 ♦ December 13, 2018
March 14, 2019

This workshop series will work with students in grades 7-12 to develop and prepare a competitive application for college admittance, honors colleges, and scholarship awards. By the end of the workshop series, students will have developed a comprehensive portfolio, including cover letter, resume, and college application essays.

Tom Ridge Environmental Center 301 Peninsula Drive, Erie PA
More info: jeanette@regscconsort.com
www.RegSciConsort.com

RSC EVENTS

- College and Career Fair
- College Prep Workshop Series
- RSC Research Symposium
- Forensic Escape Room
- Hack-A-Thon
- STEM Night
- Mini PAGE Conference



RSC COLLEGE AND CAREER FAIR

- 4th Annual- October 2015-present
- Visit college recruiters/admissions directors (1st hour)
 - Over 17 participating colleges/universities
- Mini breakout sessions (remainder of day)
 - Talks by college faculty on their research
 - Career professionals on what they are looking for in new hires and a typical work day
- Video: <https://www.youtube.com/watch?v=TQDwBFXehcQ>



COLLEGE PREP WORKSHOP SERIES

- Works with students in grades 7-19
 - Develops and prepares competitive application for college admittance, honors colleges, and scholarships
 - Activities/presentations targeted for each grade level
 - Three workshops - student centered offered in the series
- Participation for subsequent years
 - Different activities each workshop
- Upon completion of the series- developed comprehensive portfolio: including, resume, cover letter, application essays

WORKSHOP TOPICS INCLUDE:

- Career Interest Inventory Survey - PSU-Behrend
- Intro to College Mathematics - PSU Behrend
- Critical Thinking Activity: robotics - Grove City College
- College Freshman Seminar - Mercyhurst University & Gannon University
- The Common App Introduction - Regional Science Consortium
- Into to English - Gannon University
- Resume Building - PSU Behrend
- Round Table Discussions with College Students - Mercyhurst University, Gannon University, PSU Behrend

- Integrates Standards for Career Awareness and Education – 339 Plan
- Free Dual Enrollment Course
 - Participate in 3 out of 4 activities throughout the year

- Video: <https://www.youtube.com/watch?v=iMIyd0VNIvY>
- Video: https://www.youtube.com/watch?v=uzsN2L6_4Lk



FORENSIC SCIENCE ESCAPE ROOM



Students use presented information to conduct several scientific investigations to solve a mystery



Teams work together to solve the mystery and "escape the room"

Student teams of four



Integrates various skills:

Teamwork
Problem Solving
Hands-on STEM
Investigation
Critical Thinking





PROBLEM SOLVING HACK-A-THON



Students work in teams

Students from different school districts work together
Teams divided based on student surveys



Students are given a problem, must design a solution

Develop leadership skills
Ability to work as a team



Integrates various skills:

Hands-on STEM Education
Problem Solving
Team Work
Creative Thinking
Critical Thinking



"The Challenge" is presented the day of the Hack-A-Thon



Video:

<https://www.youtube.com/watch?v=NNikQRs1A0g>

NW PAGE Affiliate Event! Free Admission!



STEM Night

Thursday, May 9th, 2019
6:00pm—9:00pm

Hosted by the Regional Science Consortium
Tom Ridge Environmental Center
301 Peninsula Drive
Erie, PA 16505

RSVP by May 2nd:
Sarah Skelton: sskelton@Iroquois.iu5.org
Gae Anderson-Miller: dram@roadrunner.com

Hands on Science, Technology, Engineering, and Math Activities!
Students, Parents, Teachers Welcome!

4TH ANNUAL STEM NIGHT

- FREE Event
- Includes students of ALL ages
- 3-6 mini break out hands-on STEM activities
- Guest Speakers
- BIG SCREEN Film

Save the DATE: May 9, 2019

- Tom Ridge Environmental Center
- 6:00-9:00 PM



MINI PAGE CONFERENCE



- **SAVE the DATE – May 9, 2019**
 - Erie, PA - Tom Ridge Environmental Center, Regional Science Consortium
 - 12:00-4:30 pm
 - Cost \$50
 - Includes light breakfast and lunch
- Mini PAGE conference
 - Educators
 - Parents
 - Administrators
 - Affiliate members
- 4 break out sessions
 - Topics may include:
 - Acceleration
 - Funding for Gifted Programs/ Affiliates
 - College/ Career Preparation
 - Social/ Emotional Needs of Gifted Students



STUDENT EXPERIENCES – *Customized*



Job Shadowing



Scientific Research Projects (i.e. PJAS, Senior Project)



Class Field and Lab Experiences



Internships



MEMBERSHIP — *Long Distance*

- Experiences on Lake Erie
- Presque Isle State Park Science
- STEM Days at your school
- Weekend Field and Lab Experiences
 - Assistance with hotel reservations and discounted rates
- Equipment for the Classroom – Aquaponics
- www.RegSciTV.com
 - Live broadcasts
 - Archived Videos
- Current Long-Distance School Districts:
Warren SD and North East SD



LONG DISTANCE STUDENT FIELD AND LAB EXPERIENCES

Example Agenda (*Topics may vary*)

- 8:00-10:00 Travel to RSC and Arrival
- 10:00-10:30 Introduction to Topic (Harmful Algal Blooms)
- 10:30-11:30 Boat Sampling on Lake Erie and Presque Isle Bay
- 11:30-12:00 Lunch
- 12:00-1:00 Field Sampling; Proper Technique, Collect Water Samples; Collect Water Chemistry data
- 1:00-2:30 Field Work: Wetland Restoration Planting
- 2:30-4:00 Lab Analysis; Process all water samples
- 4:00-4:30 Result Analysis and Summary
- 4:30-6:30 Departure and Travel
- *Customize to any amount of time*



RSC FIELD TRIP TO YOUR STUDENTS!



- The RSC Staff comes to your school!
- Example Activities
 - STEM day for one grade level; rotate through three stations
 - Take-over the Science classroom for a day
 - Mobile HAB (Harmful Algal Bloom) Lab
 - educational interactive display



WHY A CONSORTIUM IS VALUABLE?

- Diverse membership allows School Districts to interact with Colleges/ Universities in a different way
- RSC invents and facilitates events incorporating multiple member types
- RSC has the ability to create events/experiences that a single high school alone could not provide
- Awards and Acknowledgements
 - Iroquois Gifted Students – Pennsylvania Governor's Award for Environmental Excellence 2016
 - Fairview School District – PJAS State Competition
 - Millcreek School District – Student researcher accepted to the Penn State Schryer's Honor College





THE RSC TEAM

- Jeanette Schnars, Ph.D. – Executive Director
- Amber Stilwell, M.S. – Laboratory Manager
- Sean Dalton, B.S. – Field Technician and GIS Specialist
- Jennifer Salem, Master Gardener – Plant Lab and Greenhouse Manager



SCHEDULE A VISIT!

- Come to TREC
 - Full tour of Laboratories, Classrooms, Theatre, Natural History Museum, and Visitor Exhibit area
 - Presque Isle State Park – beaches, lagoons, trails, wetlands, forests
- Or... We can meet at your school!
 - Meet with Gifted Coordinator, Administrators, and Teachers





THANK YOU!

- Questions?
- How can we assist?
- Need more information:
 - Sarah Skelton, ISD Gifted Coordinator
 - sskelton@irquois.iu5.org
 - Dr. Jeanette Schnars, RSC Executive Director
 - Jeanette@RegSciConsort.com
 - Regional Science Consortium
 - www.RegSciConsort.com
 - www.RegSciTV.com

