Arizona Rivers – HS Riparian Research Experience (RRE)

Dive into Arizona Rivers this Summer *- Know any high school students who would like to study some of Arizona's last remaining wild rivers? The Arizona Rivers Project is sponsoring an 15-day field camp this summer (June 5-June 20, 2009), which will give ten high school students the opportunity to apply riparian monitoring and restoration techniques to ten different river sites in Arizona. Students and mentors will receive three days of intensive field training at Southwestern Academy, followed by nine days traveling around Arizona before returning to Southwestern Academy to put it all together.*

High School Students – have you ever wanted to study plants and animals, food webs and water cycles while traveling and camping with a small group of like-minded individuals? Have you developed a science fair project or class project focused on water quality or desert ecology? Are you interested in living the life of a scientific researcher working on critical environmental issues? If so, this program is for you – please read more and send us your questions.

The Southwest's riparian corridors – the zone of enhanced biologic activity and productivity surrounding our desert streams – are a vanishing, yet precious resource. If we are to preserve these unique areas for future generations to appreciate, we need to better understand the interactions between their plants and animals and encourage the next generation to become stewards of the land.

This summer, Arizona Rivers will host a 15-day summer research experience for ten high school students between June 5 and 20. The goal of this program is to develop field research skills and a greater appreciation for Arizona's precious water resources among students and their teachers. Student participants will:

- Learn hydrologic and ecologic sampling skills
- Learn how to make rapid environmental assessments of riparian areas
- Travel around the state to help conduct riparian zone environmental assessments
- Visit unique desert, mountain and cultural sites along the way
- Work in small groups with like-minded peers and graduate student mentors
- Share their field observations, thoughts and experiences with families and friends

Students will be strongly encouraged to develop a year-long, monitoring/research project after they have attended the RRE, tapping their new-found skills as field researchers and working with an extensive group of Arizona Rivers partners. Projects can be based on laboratory or field observations related to ecology and/or hydrology.

Equally important will be the goal of developing similar skills and interests in a research mentor, such as a teacher, who will co-register with the student. These adults help us sustain this effort beyond the summer experience with their partner student and others in their community.

Student participants must apply with a research mentor (their teacher, qualified parent or someone who can assist them with their follow-up project) and who may accompany them during their initial training and final reporting periods. While it is highly recommended, it is not required that the mentor accompany the student to the RRE, but they must be willing to assist the student during the subsequent research project. Mentors will also receive 30 hours of professional growth credit for their participation during the RRE training and wrap-up.

The RRE will begin and end at Beaver Creek Campus of Southwestern Academy near Rimrock, AZ, just north of Camp Verde/Montezuma's Castle National Monument.

Arizona Rivers is funded by **SAHRA** and includes partners at:
The University of Arizona, Phoenix College and Northern Arizona University

The RRE will be structured as follows:

June 5:	Arrival, registration and dinner at Southwestern Academy, Rimrock, AZ
June 6-8:	AZrivers training for mentors and students at Southwestern Academy (Wet Beaver Creek & Montezuma's Well)
June 9:	Field excursion to Fossil Creek restoration project, Tonto Bridge S.P., and Tonto Creek
June 10-15:	Travel to field sites on Roper Lake, Gila & San Francisco Rivers, Upper San Pedro River, Cienega Creek, Catalina S.P., Biosphere 2 and Aravaipa Creek
June 16-19:	Return to Southwestern Academy – work on presentations and research project. Field excursions to Montezuma's Castle, Oak Creek Canyon, Slide Rock S.P., Tuzigoot NM, and the Verde River
June 20:	RRE Wrap-up - presentations, graduation, lunch and student pick-up

Application materials can be found on the www.azrivers.org web-site and consist of a student questionnaire, mentor application, teacher recommendation and liability waiver. A $700 participation fee is required of each student participant (a few need-based scholarships are available) and a $75 registration fee is required of each mentor accompanying their student to the initial 3-day training at Southwestern Academy. Transportation to and from Southwestern Academy is not included but all other expenses will be covered, including the 3-day field training, lodging and meals at SW Academy for both the student and their mentor. Participants arriving from out-of-state need to contact the organizers to arrange for transportation from Sky Harbor Airport in Phoenix. Applicants from both in and out of the state of Arizona and from both public and independent schools are encouraged to apply. Early application is recommended as applications will be evaluated upon arrival and students notified of acceptance within two weeks of receipt of the application. The deadline for applications is May 15, 2009. A non-refundable deposit of $150 will be due within two weeks of acceptance to reserve your place in the program. All remaining fees must be paid by June 1st, 2009.

Arizona Rivers is a relatively new educational outreach and coordinating group based at the University of Arizona, Phoenix College and at Northern Arizona University. Their mission is to facilitate collaborations between teachers/students and scientists/watershed experts to promote long-term research and monitoring of riparian environments throughout the Southwestern U.S. We wish to acknowledge the generous support of this program provided by SAHRA, an NSF-funded Center for Science and Technology headquartered at the University of Arizona in the Department of Hydrology and Water Resources. Through their financial assistance, 50% of the $1400 participation cost for the RRE has already been covered for each student as well as 75% of the $300 cost per participant for the AZrivers Teacher Workshop (June 6-8). More information regarding SAHRA can be found at www.sahra.arizona.edu.

Instructors

Arizona Rivers has a unique and distributed membership that includes faculty and researchers at the University of Arizona, Phoenix College and Northern Arizona University (www.azrivers.org/about.htm). Our partners include state and federal environmental organizations as well as non-profit and citizen-scientist groups. Our philosophy is to bring as many of these people together during our training so as to tap into their decades of expertise and passion for their work. The following personnel will principally be involved in the Summer Riparian Research Experience:

Dr. Jim Washburne is the Associate Director of Education for SAHRA, co-Director of Arizona Rivers, and Asst. Adj. Prof. for Hydrology and Water Resources at the University of Arizona. He has been involved in developing and conducting environmentally-related field programs, student activities and teacher workshops for over 12 years.

Dr. Martha P.L. Whitaker is a hydrologist, university-level hydrology instructor, and science educator at the University of Arizona. She teaches undergraduate classes in the Department of Hydrology & Water Resources, worked on the GLOBE soil moisture project for six years, and conducts GLOBE and AZ Rivers workshops as a part of The Arizona Rivers Project ("AZ Rivers"), for which she is a co-principal investigator with Dr. Jim Washburne.

Mr. John Madden is the Science Education Program Coordinator-SAHRA and a former HS environmental science instructor with over twenty years experience involving students in authentic, inquiry-based field science. He has taught AP Environmental Science as well as served on many national committees focused on improving science instruction and student field experiences.