



INSIDE MATH & SCIENCE TEACHING

TEAMS AT FIVE YEARS: LOOKING BACK AND LOOKING AHEAD

In 2015, the TEAMS grant submission was funded by the National Science Foundation, providing over \$1 million of funding to use in supporting promising math and science majors in becoming secondary teachers. Through that process, we have a number of things to brag about and several lessons learned.

Those who are good at outreach are often great at teaching.

Several of our Noyce Scholars started out in working with the public in some way through outreach work. Katie Grey was working at Grandfather Mountain when she committed to teaching full time, and Jordan Lollar English worked regularly with faculty in the Department of Biology in outreach, finding that she enjoyed working with others. It isn't unusual for those who enjoy sharing their passion to recognize that teaching may be a career for them.

Noyce Scholars have some great ideas.

Our Noyce Scholars have demonstrated that they can be creative and resourceful teachers. Faith Montgomery has developed her Forensics class and been working on an Astronomy class, and Christopher McCollum started a rocketry club at Alexander Central. Many of you have developed presentations, created curriculum, or advanced outreach options in your schools.

Working together strengthens new teachers.

Several of you are in close proximity to each other. Claire Montgomery and Lexi Garr are both in Surry County where they attended high school themselves. Laura Heinen is a new teacher at Avery County High School where Joshua Gregory is currently student teaching. And Watauga High saw Alana Patterson set up her

continued on page 3

7 High-Impact, Evidence-Based Tips for Online Teaching

Want some great ideas to help you make the most of your online teaching right now? Check out these tips from Youki Terada in a recent article from edutopia.

1. Your virtual classroom is a real learning space, so keep it organized.
2. Chunk your lessons into smaller, digestible pieces.
3. The best online teachers solicit lots of feedback.
4. Annotate and interject to scaffold learning.
5. Frequent, low-stakes quizzes are easy to do and highly effective.
6. Fight the isolation of remote learning by connecting with your students.
7. Take care of yourself!

Read the entire article [at this link on edutopia.org](https://www.edutopia.org/youki-terada-7-tips-for-online-teaching).



Got an idea for your classroom? Check out this grant opportunity!



image from canva.com

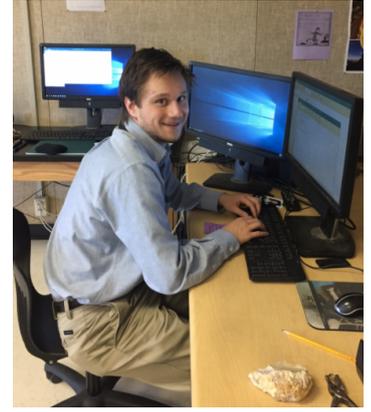
Noyce program graduates who are currently teaching in a high needs district in mathematics or science are invited to apply for classroom grants of up to \$4000 with typical awards around \$3,000. These grants are intended to provide support in removing barriers in STEM by improving pass rates, increasing student involvement, increasing student interest, increasing content competency, or similar goals. The program aims to support 15-20 teachers with funding, so if you have had an idea for your classroom, now is the time to explore writing a grant.

More information can be [found at this link](#), and if you are interested in learning about grant writing or want some guidance along the way, check out this [quick video on grant writing tips from Tracie](#).

Focus on a Noyce Scholar: Chris Kolischak - Geological Sciences

Noyce Scholars sometimes go directly to the classroom and sometimes they find other ways to engage with learners. Chris Kolischak, who received his licensure in December 2015 after completing a degree in Geological Sciences, taught for two years at River City Academy in Soldotna, Alaska. As the only science teacher, Chris developed lessons in a variety of subject areas and received grant funding to support taking students hiking in the Alaska outdoors.

However, after a series of school mergers prompted changes in staffing, Chris found an opportunity to connect his love of environmental education and the outdoors by serving as a field guide in wilderness adventure therapy in Utah. Instead of being in a classroom, Chris works through adventure activities, such as backpacking, mountain biking, skiing, and rock climbing to support students



through mentoring, connecting with their therapists, and maintaining their physical and emotional safety as they work in groups to navigate the Utah terrain. He also finds time to teach a little environmental science.

The experience has been supportive of Chris' development as a teacher. He explains that he has improved in his abilities for "...learning to sit with students where they are, meeting them where they are at, and not trying to rush solutions." He points to the importance of listening to students and acknowledging and validating their thoughts and feelings as key to building trust. Chris also recognizes that the experience has helped him to grow in his ability to balance his personal and professional life by better thinking through student outcomes. For example, he says that, "Behaviors that used to get me in a tizzy, I'm now able to brush off remaining unfazed."

Chris looks forward to returning to the classroom where he can put his lessons into action, growing a classroom culture that is supportive of where students are and encouraging of where they can go.

Photos top right: Chris at River City Academy in Soldotna, AK. Above: In Snow Canyon State Park on a rainy, 34-degree day. Photos submitted.

DON'T FORGET TO
Get Connected!



Share your twitter info!

STEM Leadership
Community
(a facebook group)



NC SCIENCE TEACHERS ASSOCIATION

NC COUNCIL OF TEACHERS OF
MATHEMATICS

The TEAMS Noyce Scholarship program at Appalachian State University is funded by the National Science Foundation (DUE 1540830)

Keep us in the know!

Have you recently developed a new course? Taken on a leadership role? Made a presentation? Let us know!

We will be updating our website to share information on all of our Noyce Scholars, and we'd like to see what you've been doing. We'd also like to keep spotlighting our Noyce Scholars in future newsletters.

Email a photo of you in your classroom plus any updates you can share about your teaching and your school to Tracie at salinastm@appstate.edu.

Additional opportunities for professional development and leadership will continue to be shared with you, and don't forget to check into the variety of programming and support offered by the Reich College of Education at Appalachian. You can find more at the [RCOE Facebook page linked here.](#)

classroom to be joined by other Noyce Scholars as teachers and interns.

Noyce Scholars have been leaders as students and teachers.

Many Noyce Scholars have contributed posters or presentations at conferences at the local, state, and national levels, and some have led professional development or other activities in their districts. Several Scholars are also outstanding at the use of social media for supporting your students and building your own networks in education.

The TEAMS Noyce program at Appalachian has supported two dozen promising future mathematics and science teachers in its five years, most of whom are currently teaching in public school classrooms or will be soon.

Noyce Scholars are committed to diverse learners and access.

As we have all responded to the challenges of the pandemic and to the opportunities offered to us by open conversations around social justice, Noyce Scholars have found many ways to work with students meaningfully. From engaging students in creative ways online to driving conversations related to diversity at Appalachian, Noyce Scholars demonstrate the leadership that we would hope to see in outstanding mathematics and science teachers.

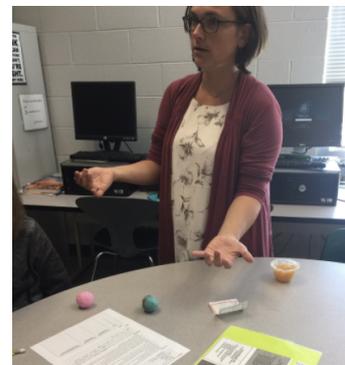
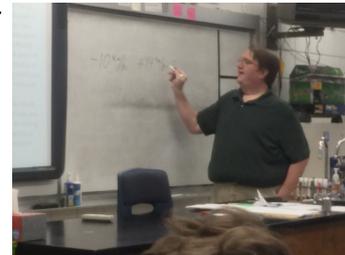
Noyce Scholars are important recruiters for future teachers.

For many Noyce Scholars, the impetus to becoming a teacher was an influential educator. As teachers, Noyce Scholars can play that role in the lives of their students, sharing their passion for teaching, for mathematics and science, and for impacting the future.



Above: TEAMS Scholars and faculty including front L-R Lexi Garr, Claire Montgomery, Faith Montgomery, Katie Gray. Back L-R Tracie McLemore Salinas, Christopher Allen, Jordan Lollar English, Carol Babyak, Deborah Crocker, David Wiley.

Below top right: Chris McCollum presents to his class at Alexander Central High School. Bottom right: Katie Gry shares with her class at Caldwell Early College. Left: Alana Patterson in her classroom at Watauga High.



A MESSAGE FROM THE DIRECTOR

In reviewing the first five years of the TEAMS program, I am reminded that one lesson we can all learn again and again is how amazing children can be when given the space and freedom to think and create and be. Typing Chris Kolischak's quotes and thinking of his groups of students trekking through the Utah wilderness remind me of a website that I have always enjoyed, *What Kids Can Do*. This site demonstrates through stories, images, and more that students are incredibly resilient, thoughtful, and creative. I'm also reminded as I visit this site and its connected sites that for many students who may be planning to be the first in their families to go to college or to leave home that our current context only makes their challenges more acute. The older child who takes care of younger siblings while parents are at work finds that more difficult with online classes. The financial, emotional, and mental challenges that may have already been difficult are perhaps more so now. How can we as educators support students in the extraordinary circumstances in which they find themselves? How can we capitalize on the opportunities we now have to actually redefine *school* in ways to make it more powerful, more inclusive, and more inspiring to the students with whom we work? How can we create spaces for our colleagues to be creative and thoughtful? These are our challenges as Noyce Scholars and mentors at this time and in years to come.

Educational responses to the crisis are capable of changing the meanings, purposes, and values of 'school'.

-- Keith Holmes,

UNESCO Futures of Education Ideas LAB

Tracie McLemore Salinas