



# 2.0 Spotlight



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## Spotlighting Mentorship

On January 3, 2013, President Obama again recognized January as National Mentoring Month 2013. Below is an excerpt from his presidential proclamation:

“A supportive mentor can mean the difference between struggle and success.”

--President Barack Obama

“Our American family is bound together by caring individuals who make it their mission to serve others. During National Mentoring Month, we pay special tribute to the men and women who enrich the lives of our young people and fortify the unbreakable bonds between one generation and the next...

“A supportive mentor can mean the difference between struggle and success. As we mark this important occasion, I encourage all Americans to spend time as a mentor and help lift our next generation toward their hopes and dreams.”

It is clear to all who work with the STARBASE 2.0 program that this venture would not be possible without the time donated by the men and women throughout the country that volunteer as our STEM Mentors. We always want to express our gratitude to these people, as they are essential to our success. Although it isn't possible to showcase every STEM Mentor during this special month honoring their service, this edition of the *STARBASE 2.0 Spotlight* offers a focused look at a few of the STEM Mentors that make our program possible.



“Volunteering can be an exciting, growing, enjoyable experience. It is truly gratifying to serve a cause, practice one's ideals, work with people, solve problems, see benefits, and know one had a hand in them.” -- Harriet Naylor

# Spotlighting STEM Mentors

## STARBASE Battle Creek

### STEM Mentor Colonel (ret) Rodger F. Seidel

STARBASE Battle Creek is pleased to recognize Colonel (ret) Rodger F. Seidel for his participation as a STARBASE 2.0 mentor. Colonel Seidel has been a STARBASE supporter since STARBASE Battle Creek began in 2006.

When STARBASE Battle Creek began, Colonel Seidel ensured that not only were the basic program needs met, but unit members went above and beyond in their support of STARBASE. Colonel Seidel was always available to meet with STARBASE guests and made STARBASE a regular stop when Distinguished Visitors visited the 110th. He spoke to STARBASE students and escorted them on their hangar and airplane tours.

He retired as wing commander on June 1st, 2012. In September, he was asked to serve as a 2.0 mentor and without hesitation accepted the invitation. He has been a model STEM Mentor, practicing new PTC skills and attending every meeting. More importantly, Colonel Seidel shares his expertise and life experience with the students he mentors. His level of personal commitment to the entire STARBASE program is extraordinary. STARBASE Battle Creek is fortunate and thankful for his support.



“ He has been a model STEM Mentor, practicing new PTC skills and attending every meeting.” -- about Col (ret) Roger Seidel

## STARBASE North Dakota

STARBASE North Dakota could not provide the afterschool STARBASE 2.0 programs in their community without the volunteer spirit and dedication of the adult mentors. Their commitment to STEM education and the local youth allows STARBASE North Dakota an opportunity to provide students living on Minot Air Force Base a STEM pipeline beginning with the DoD STARBASE program as fifth grade students, continuing with the opportunity to join a STARBASE 2.0 program afterschool in 6th and 7th grade, and finally a FIRST LEGO League team in 8th grade. Included here are a few of the STEM Mentors that help make that possible.

## STEM Mentor SrA Nathaniel Beste

SrA Nathaniel Beste is an active military member on Minot Air Force Base and has been a volunteer adult mentor for two years for the 6th grade STARBASE 2.0 program. He is engaging, dedicated, positive, and a great role model for the sixth grade students.



He relates well with his mentees and makes them feel comfortable as he guides them through the Computer Aided Design (CAD) process as they learn and apply the math and science principles of car design in Scalextric. His dedication to STARBASE 2.0 demonstrates his commitment to his community and the local youth.

## STEM Mentor MSgt Clint Ericson

MSgt Ericson is an active military member on Minot Air Force Base and a STEM Mentor for the 7th grade STARBASE 2.0 program. His wife is also a volunteer mentor for STARBASE 2.0, and their son is enrolled in the 7th grade 2.0 program. MSgt Ericson is extremely knowledgeable in robot building and programming. He has also volunteered to help coach the 8th grade FIRST LEGO League team sponsored by STARBASE North Dakota and is getting the team ready to compete at the North Dakota state FIRST LEGO League competition in February 2013. His passion for STEM education and the local community youth is evident by his commitment to volunteering for the STARBASE programs.



## STEM Mentor Mrs. Penny Ditmars



Mrs. Penny Ditmars is a sixth grade teacher at North Plains Elementary on Minot Air Force Base. She has been a volunteer mentor with the 6th grade STARBASE 2.0 program for three years. Her commitment year after year in working with students after school is admirable. Guiding her students through the car design process in Scalextric is a process she takes very seriously. She has been caring and kind as she works to encourage and support the 6th grade students in STEM during the STARBASE 2.0 afterschool program.

## New Mexico STARBASE La Luz

New Mexico STARBASE La Luz is conducting a STARBASE 2.0 program at two Albuquerque Public School middle schools - Van Buren Middle School and Wilson Middle School. The Civil Air Patrol afterschool program provides the support infrastructure, including a school affiliated facilitator, classroom space, and access to computers. STARBASE La Luz provides the STEM Mentors and hands-on science, technology, engineering, and mathematics activities for students.

Students participating in the New Mexico STARBASE 2.0 program this year are learning about model rocketry. The goal is to have students work in teams to design and build a rocket to compete in the Team America Rocketry Challenge (TARC). For this year's TARC competition, that means the rocket design must weigh less than 650 grams and carry an egg payload that reaches an altitude of 750 feet. The payload must safely land within a 48-50 second time frame, and the egg must be intact.

During the fall semester, students worked with their mentors to build and launch three different model rocket kits. They also learned how to use "RockSim," a modeling and simulation software that predicts how high these rockets would go. After gaining a basic understanding of model rocketry by building and launching the rocket kits, students then created original rocket designs using RockSim software to meet the TARC competition requirements. They finalized their designs in December and are working in teams to build their original rocket designs in January.

### STEM Mentor Cpt Greg Morgan

New Mexico STARBASE La Luz has an impressive group of STARBASE 2.0 STEM Mentors this year who are all scientists and engineers from Kirtland AFB. One of those mentors is Cpt Greg Moran who is an aeronautical engineer at the Air Force Research Laboratory.



He assists with the STARBASE 2.0 students at Van Buren Middle School and had this to say about his experience so far: "I've really enjoyed seeing the students progress through the program. They may not realize it, but they are learning important lessons about systems engineering and requirements traceability, all while getting to build rockets. The coolest part to me is to be able to simulate the students' custom rocket design on the computer and then actually build and fly it."

**" I've really enjoyed seeing the students progress through the program. They may not realize it, but they are learning important lessons about systems engineering and requirements traceability, all while getting to build rockets." --Cpt Greg Morgan**

## Spotlighting Events:

### How Tulsa STARBASE 2.0 Club Members Learned About Radio Controlled Planes



This past July 23rd -27th, an aerospace summer camp was held at the Tulsa Air and Space Museum. Attendees included 15 DoD STARBASE 2.0 club members just finishing the 6th grade program from both Hamilton Elementary and Springdale Elementary. During the week-long camp, 2.0 members were presented with an opportunity to build radio controlled (R/C) airplanes through a grant from the Oklahoma Aeronautics Commission.

A highlight of the camp was traveling to the Tulsa Glue Dobbers, Inc. Established in 1947, it is believed to be the oldest, continuously chartered, R/C flying club in the country. While there, students were taught about flight, the history of flight, and how to use their R/C plane flight controls. Once trained, students were allowed to keep their R/C planes to share what they learned with others.

## STARBASE Wright-Patt

### STEM Mentor Cpt Edgar “Edge” Cabrera

Captain Edgar “Edge” Cabrera is a second year STEM Mentor for the STARBASE 2.0 program and a first year coach for one of the STARBASE 2.0 FIRST LEGO League robotics teams, The Phantom Mindstorms. Edge came to Wright Patterson Air Force Base two years ago when he was offered a special duty assignment in the Research Laboratory.

Edge, who grew up near New York City, credits the events on September 11th for influencing his decision to join the military. During his time in the military, Edge has earned numerous awards including the Air Force Space Command Bioenvironmental Engineering Team of the Year, in both 2007 and 2009. These awards have helped Edge see the value in teamwork, which he has shared with his STARBASE teams.

Edge has been a great addition to the STARBASE 2.0 program, and he is a valued mentor and coach. When asked about the program, he responded, “STARBASE Wright-Patt is the best run STEM outreach organization with which I have been involved. Their enthusiasm is contagious, and it is a joy to work with the students, volunteers, and organizers alike.”



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--Cpt Edgar “Edge” Cabrera



## Wyoming STARBASE Academy

### STEM Mentor TSgt John Weigel

TSgt John Weigel has had a long military and volunteer career. John is a full-time member of the Wyoming Natural Guard. He has spent the last sixteen years in electronics mechanisms, communication systems, Nav-aids, and network systems. His volunteer service includes being an Assistant Scout Master with Boys Scouts of America. This year, John added being a STEM Mentor for the NUCLEAR/STARBASE2.0 FIRST Lego League (FLL) team.

John's dedication to youth is amazing. August through December, John spent every Monday evening and many Saturdays mentoring and assisting his team, The Master Commanders. "Youth these days have so little direct parental supervision time. Working with these kids gives them an opportunity to work with adults."

"I think John is one of the most patient and dedicated mentors," said Barb Marquer, Director of Wyoming STARBASE. "In addition to his caring attitude and his technical knowledge, John is able to make suggestions to the kids without them feeling incompetent. John's willingness to share his skill set and his positive attitude make him a perfect role model for our eight to fourteen year old participants."

John can't wait for next year's team to form. In the meantime, he is busy working with the NUCLEAR/STARBASE introduction to robotics spring program and building robots at home.

When asked what was the most favorite part about his fall 2012 mentoring experience, John replied, "Watching the kids learn to achieve a task with the limitations of the robot. They sometimes get frustrated or aggravated, but then their determination wins over, and they can celebrate some success."



Wyoming STARBASE is grateful for having TSgt. Weigel on their team of mentors.

## STARBASE Louisiana

### STEM Mentor Ms. Elizabeth Vance

STARBASE Louisiana's 2.0 program has quite an asset in Elizabeth Vance. She is one of the mentors from Bossier Parish school district that is partnered with the program in its inaugural year. Elizabeth provide the use of her classroom for 2.0 activities, and she supplies meetings with delicious homemade snacks and unbridled enthusiasm for science.

“Youth these days have so little direct parental supervision time. Working with these kids gives them an opportunity to work with adults.”  
--TSgt John Weigel



Elizabeth received her BS from Louisiana Tech University in Wildlife Conservation and completed an alternative certification program to become certified in secondary science. She is in her eighth year of teaching and received the Louisiana Outstanding Middle School Science Teacher of the Year award for the 2011-2012 school year. Last year, Elizabeth also had the unique opportunity to fly with the USAF Thunderbirds as their Hometown Hero when they came to Barksdale Air Force Base to perform in the air show.

Asked why she decided to participate in STARBASE 2.0, Elizabeth responded, "When our principal first told us about the STARBASE 2.0 program, I jumped at the opportunity to be involved! I grew up in a military family, and the opportunity to be partnered in the school system with a program from Barksdale is an awesome opportunity. I also wanted to be a part of this program due to the fact that STEM is so important in today's society. I have a passion for getting students excited about science and this program has been designed and is facilitated in such a way that it gets students excited about science."

Elizabeth emphasized the opportunity that STARBASE 2.0 presents to work hands-on with a small group of students to deepen their understanding of scientific principles that otherwise they wouldn't get to fully explore. She adds, "I also enjoy the opportunity for our students to be able to connect with members of our community as they work side by side with mentors from Barksdale. STARBASE 2.0 is taking concepts that we teach in the classroom and applying them in a way that really makes sense to our students in today's technology driven society." Elizabeth's competitive nature pushes the students to approach each activity as a challenge to surmount. Our program would not be the same without her support!

## Spotlighting One Program's STEM Mentor Recruiting Approach

STARBASE 2.0 Wright-Patt is fortunate to have stellar mentors who give not only their time and energy, but their dedication to the promotion of STEM education. Of the 20 adult mentors/coaches, 80% have volunteered more than one year. Two STEM Mentors are in their third year with the program, and two STEM Mentors have been involved since the pilot year, four years ago.

The mentors and coaches have been recruited in a variety of ways. First, the teachers include mentors from the district served. Some have been involved with the 5th grade STARBASE program and choose to continue with the 2.0 program, while others have

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-- Elizabeth Vance



## Spotlighting the Way Ahead: The 2012-13 Call for Participation

Throughout the 2012-13 school year, this newsletter will continue to spotlight the achievements, partnerships, and tips of the participants of the STARBASE 2.0 program.

Each month, a call will be sent out to all site participants focusing on a different aspect of the STARBASE 2.0 program.

The February 2013 issue will spotlight the schools that house our programs. Participants are asked to send information to [jennifer.buck@mac.com](mailto:jennifer.buck@mac.com).

been recommended by their principals. There are STARBASE instructors involved and one teacher from another district. Many of the teachers involved remark that they enjoy working with the students on a more personal, informal level as well as being able to interact with other adults who are in non-teaching roles.

To locate interested college students, electronic "Mentors Wanted" flyers are sent to advisors in the STEM and Education departments at the local universities. In addition, some college students have learned of the program through word of mouth.

The Wright-Patt Educational Outreach Office sends the same flyer electronically to possible interested military members. Commissioned and non commissioned officers, as well as civilians, with STEM-related assignments, have shared their expertise with the students and the other mentors. The STARBASE 2.0 Wright-Patt program has also had other STEM experts who became involved in the program through word of mouth, mentor recommendation, and volunteer appreciation events.

The high retention rate of the mentors/coaches seems to be tied to the enjoyment of being involved in the program. A big component of this is the preparation of the meetings beforehand. With busy work schedules, the mentors appreciate reviewing the agenda before they come to the meeting. The STARBASE staff generally runs or substantially supports the STEM component of the evening. Team building activities are set up with clear directions and support when needed. Another factor is that every team has returning mentors who are familiar with the makeup of STARBASE 2.0. New mentors are allowed to participate as they become comfortable with the process, and they soon become experienced themselves.

### Spotlighting Resources: [www.NationalMentoringMonth.org](http://www.NationalMentoringMonth.org)

A joint venture between the Harvard School of Public Health, MENTOR: The National Mentoring Partnership, and the Corporation for National & Community Service, [www.nationalmentoringmonth.org](http://www.nationalmentoringmonth.org) pulls together important resources available from the members of their cohort. From the database of potential mentoring opportunities available from MENTOR to marketing tools to help you thank your volunteers, this resource is a place to turn.

