

2018 National Teacher of the Year Finalist



Kara Ball

2018 Department of Defense
Education Activity Teacher of
the Year

DeLalio Elementary School
Americas Mid-Atlantic, Camp
Lejeune
Jacksonville, North Carolina

School Profile: Suburban,
Department of Defense
Education Agency School
District Size: 10,727
School Size: 119

Subject: Elementary
Grade: 4/5

Years in Teaching: 10
Years in Position: 1

Candidate's Resume Information

Education

School	Walden University
Degree	M.S.Ed.
Major	Curriculum, Instruction and Assessment
Years Attended	2009 - 2011

School	Towson University
Degree	B.S. summa cum laude
Major	Elementary Education and Special Education
Years Attended	2006 - 2008

School	Montgomery College
Degree	Associate
Major	Education
Years Attended	2004 - 2006

Certification

Certification	National Board Certified Teacher (NBCT)
Year Obtained	2014

Certification	North Carolina Standard Professional K-6
Year Obtained	2013

Certification	North Carolina Special Education Curriculum
Year Obtained	2013

Certification	Maryland Educator Advanced Professional
Year Obtained	2013

Certification	Google Educator Level 1
Year Obtained	2016

Experience



Title	Teacher and Science, Technology, Engineering, and Mathematics (STEM) Coordinator -
Organization	Department of Defense Education Activity (DoDEA), DeLalio Elementary School, Camp Lejeune, NC
Years in Position	2014-2017

Title	Teacher - Johnson Primary School, Camp Lejeune, NC
Organization	Department of Defense Education Activity (DoDEA)
Years in Position	2013-2014

Title	Teacher - Burtonsville Elementary School
Organization	Montgomery County Public Schools, MD
Years in Position	2011-2013

Title	Teacher - Beverly Farms Elementary School
Organization	Montgomery County Public Schools
Years in Position	2008-2011

Leadership

Position	Strategic Planning Committee Team Member
Organization	Department of Defense Education Activity (DoDEA)
Years in Position	2017

Position	Science, Technology, Engineering, and Mathematics (STEM) Coordinator and Staff Developer
Organization	Department of Defense Education Activity (DoDEA), Camp Lejeune, NC
Years in Position	2015-2017

Position	DoDEA Continuous School Improvement (CSI) Team Member
Organization	Department of Defense Education Activity (DoDEA), Camp Lejeune, NC
Years in Position	2014-2017

Position	United States Naval Academy SET Sail STEM Educator Team Leader
Organization	US Navy
Years in Position	2016-2017



Position	National Board Certified Teacher Representative at the National Leadership Conference
Organization	National Board for Professional Teaching Standards (NBPTS)
Years in Position	2015

Awards and Other Recognitions

Award/Recognition	Dept. of Defense Education Activity (DoDEA) Teacher of the Year; DoDEA Mid-Atlantic District Teacher of the Year
Year Received	2018

Award/Recognition	Presidential Awards for Excellence in Mathematics and Science Teaching (PAEMST) DoDEA State Finalist
Year Received	2016

Award/Recognition	North Carolina Center for Advancement in Teaching (NCCAT) Seminar Recipient
Year Received	2015

Award/Recognition	Montgomery County Public Schools Shirley J. Lowrie "Thank You for Teaching Award" - recognizing extraordinary elementary school teachers
Year Received	2013

Award/Recognition	Montgomery County Public Schools Retirees' Association Professional Growth and Development Scholarship
Year Received	2010

Candidate's Professional Biography

As a cultivator of curiosity, Kara Ball uses science, technology, engineering, and mathematics (STEM) education and project-based learning to transform her elementary students into the leaders of tomorrow. Each year Kara brings sharks into her classroom and her students conduct a shark dissection. She also organizes a school wide Cardboard Arcade where students use the engineering design process (EDP) to work in teams to imagine the possibilities of a single cardboard box.

Currently teaching military-connected students at Camp Lejeune for the Department of Defense Education Activity (DoDEA), Kara has also taught multi-age, special education, STEM, and advanced mathematics. She also has experience teaching in communities with large homeless and English as a Second Language (ESL) populations.



Kara is a National Board Certified Teacher who has served as a Mentor Teacher for eight years, District STEM coordinator, and U.S Naval Academy SET Sail STEM Team Leader. She is a member of DoDEA's Strategic Planning Committee and her school's Continuous School Improvement Team. In 2013 she was the recipient of the Shirley J. Lowrie Award from Montgomery County Public Schools, Md., honoring an exemplary elementary education teacher. In 2016, she was DoDEA's finalist for the Presidential Awards for Excellence in Mathematics and Science Teaching (PAEMST).

Candidate's Application Questions

Question	Answer
<p>Describe a lesson that defines you as a teacher. How did you engage all students in the learning and how did that learning influence your students? How are your beliefs about teaching demonstrated in this lesson?</p>	<p>Our military volunteers arrive an hour before the students will enter the lab. I have them gather around as I go over how they will be supporting the students during a shark dissection. The unease builds on some of the volunteers' faces as they begin to realize what they have volunteered for. I reassure them that the students have been preparing for this event for over a month, and I encourage them to let the students lead the way. What I purposefully neglect to tell the volunteers is the age of the scientists, preferring instead to let the second graders demonstrate just how capable they are. This shark conservation project based learning (PBL) experience defines me as a teacher because I believe students of all ability levels need opportunities to use what they learn to make a difference in the world. Four years ago we did our first dissection when I was working as the K-5 science, technology, engineering, and mathematics (STEM) teacher. Now I collaborate with the second grade teacher to trade classes in order to continue this project. Together we ensure that students with special needs and those who are non-native English speakers are supported in their learning teams. I welcome parents who want to learn about sharks and help with the dissection in our STEM lab, encouraging them to become students for the day. As a shark advocate, I have found that most people fear sharks because they don't understand them. The information the students gained from this PBL activity not only influences their thoughts about sharks, but it shifts their thinking towards wanting to learn about the unknown. This constructivist philosophy is at the center of my beliefs as a teacher. I strive to provide elementary students with opportunities to participate in PBL experiences that tap into their passions and help them connect to the content and learning opportunities that exist in their world. This topic is especially important to my students because they are members of a coastal community. My students are fascinated by sharks and believe them to be "man-eaters." Eager to begin, the students start the unit by selecting a shark species to research. Students researched shark anatomy, habitats,</p>

	<p>and human impact for the unit. Students discovered that sharks are more at risk of being killed by us than we are by them. The realization that they could help save the sharks from humans is what resonated most with the students. Before they could make a plan to save the sharks, they had to perform a dissection to identify why the Spiny Dogfish sharks were dying. On dissection day, the young scientists approach the lab room. Excitement and anticipation can be heard down the halls as they start to discuss the dissection. Even our most reluctant students are eager to work with their team of fellow scientists as they collect data about the sharks, such as visible external injuries, length, weight, and how many unborn pups are present. Data is collected and compiled into a report seeking potential causes of the population decline and solutions. A student can be heard squealing with delight from across the lab room as her team opened the uterus of their shark to reveal that the shark was pregnant with not one, or two, but three pups. She explained, "These sharks can't have baby sharks until they are 18 years old, which could be one reason why this shark population is declining." The looks on the volunteers' faces as this 7-year-old student tells them information about the sharks with the ease and confidence of a scientific expert is why I provide all students with these types of educational opportunities. This unit has become an annual project that puts some of our youngest students in the role of a scientist, a role often left to high school students or adults. Since initiating this project three years ago, my first day of a new school year always begins with a group of second grade students waiting outside my classroom door, wanting the assurance that they too will have the opportunity to dissect a shark. School needs to be a place where students come excited to learn and eager to make a difference. Project based learning provides the opportunity for students of all ability levels to achieve excellence. We need to change the narrative about elementary school students, from those who will make a difference in the future to those who can and are making a difference now.</p>
<p>Describe a project or initiative you have been involved in. What was your role, and how did this contribute to the overall school culture?</p>	<p>Since 2014 I have organized a cardboard arcade for the entire school every February. This event has come to define our school culture as one where our students are leaders and learners who work together to build their futures, even if that starts with a cardboard box. This project originated from a video of a nine- year-old boy named Caine who was transforming cardboard boxes into arcade games. Watching as Caine's community celebrated his ingenuity by hosting a "day of play," I knew our school culture and community could benefit from a similar experience, and I collaborated with my colleagues to develop a similar program. The Cardboard Arcade project has our students filling roles as designers, engineers, and entrepreneurs. Using the engineering design process (EDP), students work in teams to imagine the possibilities of a single cardboard box. They share ideas and build working arcade games out of</p>



	<p>recycled goods. Not only do they have to design and build their games but they are responsible for making sure their games work. Our students have become excellent divergent thinkers, who can look at a cardboard box and see its potential to become a claw machine or a mini golf course. We host this event in February because this is right at the conclusion of our second largest moving season for our military-connected students. By timing the arcade to coincide with these new arrivals, I am able to break down those typical “new student” fears. This event is an excellent way to involve new families in our school culture by having them donate their moving boxes to the arcade and join with our local community who attend our arcade day, excited to see what our students have created. At a recent Teacher Leadership conference, I shared the educational benefits of hosting a cardboard arcade. Within a week one of the attendees had already organized her own school arcade. I collaborated with another teacher to plan this project for her school which not only resulted in record participation from the community, but also with her school winning the “Education Project of the Year” award for hosting an arcade. On our arcade day we see almost 100% attendance and participation, zero office referrals, full inclusion from our special education students, and complete support from our school community. Over 100 military volunteers assist the design teams to bring their ideas to life. Students build and tinker, perfecting their cardboard games. Our students take turns playing each other’s games, marveling at the creativity shown by the other designers. The last bell rings signaling the grand opening of the arcade to the community. By the end of the arcade the students are already planning what they will build next. When asked what their favorite part of the arcade is they say, “Being in charge.” Students start to realize that being an inventor isn’t limited to adults. The cardboard arcade project brings together our school community and inspires the next generation of innovators.</p>
<p>How do you ensure that your students are connected to the world around them? Describe the ways in which you do this.</p>	<p>The shelf behind my desk was once littered with shells that were given to me by my students; that was ...until the students asked for them back. Fiona, a fifth grade student, brought a shell for my collection. Instead of just accepting the shell as I had done in the past, I inquired if she knew what type of animal had previously lived in the shell. Without hesitation she said, “Animals don’t live in shells.” Fiona isn’t alone in this belief. Most people don’t think twice about taking a shell from the beach, myself included. When I clarified with Fiona that the shells are homes to a variety of animals, she was horrified. You could see the puzzlement in her eyes as she began to question what she once knew. Fiona wasn’t the only one thinking. I was recalling a blog I had read earlier about a 3D project called “Shell-ter”. This verbal exchange led to a lesson that would transcend the classroom. The lesson provided students an opportunity to design and print replacement shells for crabs using a 3D printer. I wanted to design a</p>



	<p>lesson that would not only connect my students with the community they lived in but also to the digital world where most service projects exist. I planned for the students to explore how our school could help combat the effects of human harvesting of shells from our local beaches, something we were all guilty of doing. Project “Shell-ter” is unique because it brings a digital community of people with 3D printers together to address a problem, and I knew my students could help. Students researched the plight of hermit crabs. I completed my own research alongside the students, learning about 3D printing and how it's being harnessed to make a difference. Together, we realized the summer tourist economy had been having a negative impact on our crab population. Every time tourists took a shell from the beach as a souvenir, they reduced the shelter options for the crabs, making them vulnerable to predators and the elements. Math and science were integrated into the lesson through calculating volume to help approximate shell size. Students applied what they knew about animal adaptations to create a shell that would camouflage the crab from predators, and to determine what type of filament would be biodegradable and safe for the environment. Utilizing the hermit crab tanks on campus, students were able to test and improve their designs. They also believed it was important to share what they had learned about human harvesting of shells, deciding to create public service announcements about the issue. At the end of this unit on crabs, the students who had given me shells prior to this project asked if they could have them back, wanting to return the shells to the natural habitat. These moments are why I wanted to become a teacher. My students are making a difference in the world, not because I told them to, but rather because they felt empowered.</p>
<p>What do you consider to be a major public education issue today? Describe why this is important to you, and how you are addressing this from your classroom.</p>	<p>The Bureau of Labor Statistics estimates that by 2024 there will be half a million new jobs in computer science. In 2017, the White House issued a Presidential Memorandum making computer science one of its top priorities in education. Renowned technology educator David Warlick argues, “We need technology in every classroom and in every student and teacher’s hand, because it is the pen and paper of our time, it is the lens through which we experience much of our world.” I consider the lack of computer science opportunities for elementary students to be a major issue in public education today. It’s too late to wait until middle or high school to teach something so crucial to our students’ future success. I want all elementary students to actively use technology to build global connections, write code, collaborate with others, invent new technologies, program robots, and access the world of information at their fingertips. Educators recognize the importance of teaching reading and math, but many have yet to fully realize the significance of teaching computer science as a pathway to college and career. Our students interact with technology on a daily basis outside of school but in a passive</p>



	<p>manner, simply consuming technology without understanding how it is created or controlled, and this must change. I believe elementary students are capable of learning computer science, and I am leading the change. I have secured robotics through grants and funding, giving our K-5 students opportunities to learn how to build and program them. In 2016, I was selected to attend a SeaPerch robotics training at the Naval Academy, learning how to build underwater remotely operated vehicles. This program is typically only offered to secondary students, but my district now hosts a SeaPerch program for grades three through five. Last year I became a Google Certified Educator, ensuring that I was prepared to teach my students how to use all of the Google Apps available to them. In addition to helping our students understand computer science, I have led professional development sessions for teachers both in and out of my district, building computer science capacity in elementary education. I have also encouraged our students to become leaders in computer science with events like the “Kids Can Code,” where students are partnered with an adult volunteer in a paired programming activity. Events like this help us to gain community support for computer science in elementary education. Technology has expanded the global perspective of my students. Whether exploring other continents through virtual field trips or communicating online with a volcanologist for a genius hour project, my students are actively using technology to enhance their learning. Convincing skeptics that elementary students are capable and willing to learn computer science is a challenge; however, computer science skills are necessary for preparing our students for jobs that don’t yet exist, using the technology they will likely invent. This can only happen if we give our youngest students the opportunities to engage, communicate, learn, and create with technology.</p>
<p>As the 2017 National Teacher of the Year, you serve as a spokesperson and representative for teachers and students. What is your message? What will you communicate to your profession and to the general public?</p>	<p>Winston Churchill once said, “Success is the ability to go from one failure to another with no loss of enthusiasm.” Ask any teacher, and he/she will tell you students fail more often than they succeed. In those moments of failure, teachers can lose or peak a student’s enthusiasm for learning, and I want to peak it. Instead of focusing on solely supporting student success, I am also giving them courage to persevere. My National Teacher of the Year message to my students and my colleagues is to have the courage to continue and persevere in the face of failure. 10, 9, 8...Harper checks the connections of the launch controller...7, 6, 5, 4 hoping that the model rocket she built will launch...3, 2, 1 “BLAST OFF!” she shouts. Halfway through its flight path, the rocket’s parachute fails to deploy and the rocket falls back down. She immediately begins to assess the situation, looking for the potential causes for the parachute not deploying. She takes a few moments to change her packing method then prepares to attempt another launch. Harper’s first launch was a failure, but I expect failure in my classroom. My students are expected to work through</p>



failures, like engineers, and learn from their mistakes. Prior to building their rockets students used trial and error. The students determined that certain fin placements failed, but with each adjustment they got closer to discovering what would be successful. Failure fosters a student's ability to be self-determined and makes learning accessible to all. During the rocket unit I used the WD-40 product as an example of a time where adults used failure to succeed. A rocket chemical company was trying to create a degreaser solvent for rockets. Their first attempt at the water displacement (WD) solvent was WD-1. We discussed if WD-1 was their first attempt then what did WD-40 mean? The students came to the realization that it took forty attempts to perfect it. Instead of giving up the company tried something different on each attempt until they succeeded. These examples of "famous" failures and the sharing of my own personal experiences help my students to understand that their own greatness can come from failure. I've noticed that students who aren't taught how to handle disappointment are less likely to try new things. Failing can be a painful process, but our students will be better equipped to handle it if we teach them the skills to help them. We as teachers need to be willing to be vulnerable and express to our students when we don't know something. We need administrators to encourage teachers to take risks and try new things in the classroom. If we expect our students to try new things then we as teachers need to be willing to do the same. One of the reasons I became a science, technology, engineering, and mathematics (STEM) teacher was because of the number of gratifying challenges it provides to both my students and me. When learning how to use our 3D printer I had many failed prints, but with each misprint I learned something new. I didn't make these mistakes away from my students; I made them with them, modeling how tinkering and prototyping can lead to success. For the rocket unit the students understood there was a chance their rockets wouldn't launch. We even researched the number of failed attempts National Aeronautics and Space Administration (NASA) experiences with rocket launches. STEM education activities like rocket building give students the opportunity to think like engineers as they test their designs, identifying what is and isn't working; failing until they succeed. It took Harper four attempts to achieve a successful launch, learning from each mistake she made along the way. Students like Harper, who develop skills like grit and perseverance, understand you often fail before you succeed. The things my students have failed at but stuck with have more value and meaning to them than if they had success on the first try. It's important for us to teach skills like compassion, empathy, adaptability, and perseverance. These skills will support students in overcoming not only failure but many other challenges. The Department of Education's STEM report notes the importance of exposing students to risk and failure as an essential aspect of building future success.



	Experiencing failure during the learning process leads to greater success later in life. Our job is to help our students believe in their capabilities and guide them as they persevere through their challenges on their way to success.
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Candidate's Supporting Evidence

[Recommendation Letter 1](#)

[Recommendation Letter 2](#)

[Recommendation Letter 3](#)

