

FELLOWSHIP RATIONALE AND PURPOSE

- When thinking about your teaching practice, describe what you know about your students, their backgrounds and their learning challenges.
- What are the gaps in your own practice or the culture of your school that your fellowship will address?
- How do you intend to strengthen your teaching practice through this fellowship to meet your students' needs?
- Reference specific demographic and achievement data of your students related to these needs/challenges.
- What are your learning goals?
- What are the key questions that will guide your professional learning?
- What grade(s) and subject area(s) do you teach?

INDIVIDUAL

The purpose of this fellowship is to research the refugee crisis, to learn more about the reasons people are forced to leave their homes, the conditions refugees are living in abroad, and the political divide about how the world should handle the crisis. I would like to travel to Greece, Jordan, and Turkey to gather resources, ideas, and connections in order to improve the Migration unit for my freshmen World Studies class.

We start my World Studies class by learning about identity and culture. My students write a snapshot autobiography, fill out surveys, and participate in icebreakers and teamwork activities. I do this to build a strong social component in my classroom, but also to get to know my students and redesign curriculum that they will find more engaging. I spend time in the hallways, lunchroom, coaching multiple sports, and in the community to get to know my students. I eat in local restaurants, get my haircut in the community, and play in a summer softball league with my students and their families. Our district website lists my school as being 86.3% Hispanic and 12.8% African American. The population is 98.2% low income, 24% special education, and 26.9% of the students are considered English language learners. Every one of those students has a different story.

My school is located in an immigrant community. If you drive down the main street on a summer day, it feels like you could be in Mexico. Spanish music is blasting from loudspeakers and cars, Mexican restaurants and shops are located on every corner, and a giant arch with the Mexican flag welcomes you to the community. There are students in my class who are refugees from Honduras and were recently granted asylum. They fled due to some of the gang violence in their community. This fellowship will provide me with a sense of perspective about some of my students' lives and help me to establish a deeper relationship with their families.

I am currently involved in a professional learning community in the district that focuses on culturally sustaining pedagogy. This type of curriculum values our students' culture, language, and history, but also introduces students to other cultures. My migration unit is mostly framed around Mexican and Central American immigration. Although I have a small case study on global refugees, this is a major gap in my World Studies curriculum. This fellowship will address these gaps, as I will be able to gather primary and secondary sources to use in the classroom, learn about new ideas from the global refugee crisis, and be able to collaborate and communicate with other schools abroad.

I recently had my students fill out a survey about my class and several wrote about how they wanted to learn more about Syrian refugees. This is what motivated me to apply for this fellowship. If my students are more engaged in a topic, then they are more likely to learn the historical thinking skills and the SAT aligned Common Core standards that I am teaching in my classroom.

Statistically my school is below district average in several important categories. Our SAT average is 89 points below average, the 5-year cohort graduation rate is 8.3% below average, and college enrollment is 21.7% below average. This fellowship won't drastically alter any of that data, but I believe that learning about the world helps our students appreciate what they have and hopefully encourages more students to take advantage of our opportunities. I teach nearly every freshman at my school, so introducing them to this issue will have a lasting effect throughout their educational experience. I currently teach the political spectrum and have students compare and contrast liberal and conservative viewpoints on immigration issues. My learning goal is to redesign my migration unit so that it has a stronger emphasis on the global refugee crisis. There are several key questions that will guide my research:

- What global factors cause people to become refugees?
- What is the refugee experience like in different places around the world?
- What are the different perspectives regarding helping refugees?

Researching these questions will help me build on my current curriculum in order to teach my students more about what is happening in the world today. As an International Baccalaureate school, we strive to develop intercultural understanding and respect. The knowledge from this research will help my students to become global citizens.

Team

Our team consists of two teachers; a fifth through eighth grade science teacher who is a member of the National Science Teachers Association (NSTA) and a third-grade teacher who teaches all subjects. We often unite our classes to work on various science projects such as exploring simple machines and making paper. Our professional collaboration has included co-attendance at several science workshops. In working together, we have identified several key questions specifically related to the STEM field.

Our first learning goal is to incorporate STEM lessons into all subjects. Based on data from an informal poll, one student learning challenge we discovered is that our students have shown a lack of interest in

STEM related careers. In December 2018, we polled 153 students in grades 1-8 to see what careers might interest them after graduation. Less than 50 percent of males and less than 40 percent of females chose a career in a STEM field. This low percentage matched the declining achievement scores recorded on our student standardized tests in math and science. Student math scores fell from 61 percent in fifth grade to 53 percent in seventh grade, and student science scores fell from 68 percent to 64 percent, respectively. From this data, our assumption is that if our students are not displaying an interest in science or math, they will not be inclined to choose a career in a STEM field.

We work at a small preschool through eighth-grade campus built in 1914 located in a small agricultural community in Southeastern Michigan. Our school has a student body of 212 students. Seventy percent of our student body is comprised of direct descendants of the founding families; many still farm their ancestors' land. Additional STEM training would also benefit future farmers. Twenty percent of our enrolled families earn less than \$59,479, which is the median income reported in the 2013-2017 U.S. Census Report for our area.

Our second learning goal is to bridge the gap in our own instructional practices due to a lack of available STEM professional development in our area. Although our research from the Michigan STEM Partnership (MSP) shows that schools in larger cities have providers who come into the classroom to reinforce STEM lessons with hands-on experiments, the only way for us to fill this void is by seeking out STEM professional development outside our area.

Our third learning goal is to build our STEM model by putting together the instructional framework as part of our workplace development. Specifically, we will present more engaging STEM lessons, create an after-school STEM club, introduce a Science Olympiad Assembly, host a community STEM night, and start an after-school robotics club. Our project will include collecting resources, building a network of support, incorporating a good evaluation process, and sharing our successes.

Project Description

- Describe the details of your proposed fellowship and the research behind it.
- What key activities will you pursue?
- How do they relate to the needs of your students and your learning goals?
- What is the timeframe for achieving your fellowship goals?

Individual

My intended itinerary is as follows:

Day 1: Drive from home to St. Louis, Missouri

Day 2: I will visit the St. Louis Arch. This arch was built to commemorate Westward Expansion. Also, the foundation for the arch was created as a New Deal project. This will be my sole urban example of a New Deal project. It will also serve as a demonstration of a project that was completed with the future in mind (the arch wasn't actually finished until 1965). I will visit with park rangers to discuss the timeline as well as the living and working conditions of the workers.

Also, on Day 2 I will drive to Omaha.

Day 3: I will drive from Omaha to Custer State Park.

Day 4: Tour Badlands National Park. At this location I will focus on the infrastructure put into place by the New Deal workers, known as the Works Progress Administration (Works Progress Administration) and the Civilian Conservation Corps (Civilian Conservation Corp). I will meet with the park rangers at the stations to discuss the region's development in a biome that is out of my normal climate.

Day 4: Tour Wind Cave National Park. At this location I will focus on the building structures created and remodeled by the Works Progress Administration and Civilian Conservation Corp workers, as well as the reservoir, water system, and concrete stairs within the cave. The park rangers that lead these cave tours wear the same type of clothing that the workers would have worn when developing the infrastructure necessary for the caves to be toured. Additionally, I will visit the pigtail bridge that these workers constructed. I will tour these locations with a park ranger to further understand the living and working conditions of the workers.

Day 5: Tour Custer State Park. My focus at this location will be the three dams built by the Civilian Conservation Corp workers during the New Deal era. I will visit with the park rangers to understand the idiosyncrasies of each dam's construction and design, and how this impacted the Civilian Conservation Corp and Works Progress Administration workers that built them.

Day 6: Tour Mount Rushmore. At this location I will focus on the monument itself, documenting the difficult conditions the workers were living and working in. I will visually document the size of the monument. I will also tour the Harney Peak Lookout Tower where the stones for the tower were hand harvested and carried to the building by the Civilian Conservation Corp workers. I will also tour the Sylvan Creek Lodge, built by the Civilian Conservation Corp as the center of the Mount Rushmore National Memorial. This will include driving the Needles Highway where I will see the road improvements that were made to the infrastructure in this area. I will also tour the museum and visit with park rangers to gain a deeper understanding of why an artistic national icon was built in the middle of nowhere. I will seek to better understand the logistics of making that happen.

Day 7: I will drive to Devil's Tower on this day. Today I will tour Devil's Tower. At this location I will focus on the museum which was built (along with other infrastructure) by the Civilian Conservation Corp workers. I will visit with the park rangers in an attempt to better understand the museum building, and how it was built given the current technology during that time.

Day 8: Drive to Grand Teton National Park.

Day 8 - 11: Tour Grand Teton. At this location I will focus on the library, built by the Works Progress Administration workers during the New Deal era. I will also evaluate the infrastructure within the park, built during the New Deal, that makes it accessible today. I will also take a rafting trip on the Snake River to better conceptualize the rough terrain and the difficulties that the workers would have had accessing the area. I will work with the park rangers to gain a better understanding of these topics. I will also tour Jackson, WY, in order to better conceptualize the impact of the projects on the immediate community.

Day 12: Drive to Yellowstone National Park.

Day 13 - 16: Tour Yellowstone. At this location I will focus on the infrastructure, built by the Civilian Conservation Corp workers that makes accessible the natural beauty within the park. I will also tour the forest that was tended to by the "Tree Army" as the Civilian Conservation Corp workers were often called. I will work with the park rangers to find the less known locations where these workers were developing the area. I will also talk with locals in the town of West Yellowstone to better understand the long-term impact of these projects on the local economy.

Day 17: Drive to Theodore Roosevelt National Park.

Day 18: Visit Theodore Roosevelt National Park. At this location I will focus on the infrastructure built by the Civilian Conservation Corp to make accessible the natural beauty of this location. I will work with the park rangers here to gain a deeper understanding of the living and working conditions of the workers, as well as how this park has impacted the area in the long term.

Day 19: Drive to Minneapolis, MN.

Day 20: Visit Fort Snelling. At this location I will focus on the structures that the 200 - 300 Civilian Conservation Corp and Works Progress Administration workers rebuilt. I will talk with park rangers about the conditions of the fort prior to the project, and what the conditions were like for the workers who rebuilt those structures. I will seek to gain a deeper understanding of how difficult the work must have been.

Day 21 - 22: Drive home with a stop in Effingham, Indiana.

Team

The design of our two-week fellowship is three-tiered, each tier supporting our targeted areas of professional growth (listed above): to understand the history of deaf education; to see authentic implementation of strategies for students' communication success; and to consider the future of the field by learning from those at its forefront. Towards that end, we would tour the National Institute for Young Deaf in Paris to gain a better understanding of the history of deaf education. In addition, we will observe education programs for the deaf in London similar to our program where deaf students integrate successfully in the mainstream setting. Finally, we will attend a global symposium for educators of the deaf where we would learn from and accumulate best practices from professionals who specialize in an auditory/oral approach. Institut National de Jeunes Sourds de Paris (National Institute for Young Deaf in Paris) was established as the first public school in the world for deaf students in 1760. Touring the prestigious Institute would provide us with an historical perspective unparalleled to anything we could find locally. By examining primary sources of information first-hand as well as speaking directly with the professionals there, we will come away with a deeper understanding of and appreciation for the advancements in pedagogy and hearing technologies in the field of deaf education.

Selwyn Primary School (in Newham, London) and Laycock Primary School (In Islington, London) are similar programs to ours. They are the UK version of a public elementary school, and have "deaf provision services," meaning they serve deaf students within an inclusive setting supported by trained and certified teachers of the deaf. Both programs utilize a listening and spoken language approach to learning, as do we. London and its surroundings have a wide cultural and ethnic diversity which would be represented in the population of these schools. In addition to deaf students, these schools also serve students for whom English is not their first language. This is very much like the makeup of our elementary campus. Observing these programs and the successful integration of deaf students into an inclusive setting with their hearing peers will have direct impact on our teaching in that we will emulate the strategies observed with our students. Through our research and initial inquiries to the various UK programs as possible site visits, we have developed a burgeoning relationship with Selwyn Primary School. Our second-grade students and their counterparts are participating in a pen pal project. It has been rewarding to watch these relationships develop as the students connect to others

like them from a different part of the world. Our few initial email interactions with the professionals there have been positive, and they welcome the possibility of our visit. We hope to expand this relationship moving forward. Knightsfield School (in Welwyn Garden City, north of London) is a secondary program also utilizing an auditory-oral approach. Even though we, the fellowship team, work with elementary aged students, observing older deaf students utilizing successful communication strategies would give us a long-term vision for our young students. It goes without saying that the collaboration between ourselves and our global colleagues can only serve to enrich all of us as we share resources and ideas on how best to serve our students.

Alexander Graham Bell Association for the Deaf's Global Listening and Spoken Language Symposium is being held in Madrid, Spain June 30-July 2, 2019. The AG Bell Association is the only international organization dedicated to the advancement of listening and spoken language for the deaf. The Symposium is a biennial event offered in various locations. Topics to be addressed at the 2019 Symposium include: cognitive, literacy and social skills, and child development and strategies for acquisition; mentoring, parent guidance and coaching and family support; cutting edge research around listening and spoken language development; networking sessions. These topics lend themselves directly to our professional learning goals outlined above. We view our attendance at this symposium as a once in a lifetime opportunity to be surrounded by likeminded professionals who are renowned experts in our profession. Our professional growth and enrichment would be immeasurable.

Teacher Growth and Learning

- How will your fellowship build **your** content knowledge and strengthen **your** instructional practice?
- How will your fellowship help you address **your** learning goals and professional development?

Individual

Serving as an elementary and middle school visual arts teacher, this program would help build my content knowledge and strengthen my instructional practice. Students in my community are constantly navigating multiple cultures in order to be successful. Participating in this fellowship in the Dominican Republic will help me better understand the struggle and perseverance it takes to do this. Instead of their home culture being drastically different from their school culture, I would like to create a bridge that connects the two.

Because I will be taking almost exclusively private instruction, I will be able to cater my learning goals to my particular needs. Most of my private instruction will take place within cultural institutions like the Museo de Arte Moderno, Quinta Dominica, Museo Bellapart, Amber Museum, and Centro Cultural de España Santo Domingo. Inside those museums I will gain exposure to the arts of the Dominican Republic and surrounding areas. I will also be able to seek out tours and workshops offered by these institutions to continue building my background knowledge of these artistic traditions and practitioners.

During my time in language classes I will be able to have moments where I am simultaneously learning the language while noting artists and culture to bring back to my arts classroom in New York City. Becoming a better equipped art teacher, both in character and language instructional practices, will

lead to students increasing their appreciation and pride for artists they can connect to as having come from their own cultural and historical backgrounds.

I have learned that communication with our families is not solely about the Spanish language, but also how and when to communicate, whether that be on the phone, through text, or inviting them into the classroom. The homestay and service component of Spanish Abroad will provide me with the experiences to be successful as a result of the full immersion. Building a relationship with my homestay family will be good practice for building relationships with our students' families. Working with communities in Santo Domingo will teach me to be a better communicator in the Spanish language in Latin American cultures.

Team

This fellowship will allow us to immerse ourselves in the history and culture of the Reformation. As mentioned above, this topic provides significant challenges to teach in grade seven. We will use the materials and experiences we gather to build our own content knowledge. When we are in each location, we will be able to follow natural inquiries by accessing information and experts that are not available to us from our home locations. This learning will be challenging for us because of cultural and linguistic barriers, but being present at each of these locations allows for complete understanding of the environment surrounding the Reformation. We expect to garner a fuller picture of Luther as an individual, as a part of the system against which he was protesting, and as the leader of a social movement. This immersion into the landscape of Reformation Germany will greatly improve our evaluation of Luther's actions and their effects. We will learn about systemic challenges and changes, along with the way in which they are remembered in history.

Our instructional practice will be strengthened because materials appropriate for our students' reading and comprehension levels can better be produced with first-hand knowledge. We will be able to share knowledge with students in a variety of ways, including pictures, digitized video, and storytelling. Neither of us has traveled to continental Europe previously, so this trip will surely infuse passion into our teaching, sparking student interest in the lessons of history that are instructive for transforming society today.

Throughout these experiences, we will be able to interact with tour guides and religious leaders who have trained for these sites and are experts at interpreting the Reformation and the life of Martin Luther. We expect that having first-hand interactions with these experts will enhance our ability to evaluate the forces that shaped Luther as a reformer, and inform us about how the Reformation was sustained against all odds. In Wittenberg and Eisleben, there will be English-speaking experts that serve "on loan" as witnesses to the living testament of the Reformation in the 21st century.

In each of these locations, we will seek to identify patterns in history for social movements. As students embark on their own projects to identify issues and make changes within their localities, they will be able to use the contacts that we make while on the Luther Trail as resources, for edification and/or reflection on patterns of history. These contacts may be made through 21st century technology, such

as video chats.

Application of Learning to Instructional Practice

- Outline a plan, short and long range (unit), for achieving your learning goals and the intended outcomes for your students, school and community.
- What are the new learning experiences that will result from your fellowship?
- What are the specific processes and collaborations that will lead to new learning experiences for your students?
- What are the roles of colleagues, school leadership and external partners in helping you achieve the outcomes you seek?
- How will you assess your students' learning?

Individual

My fellowship will transform the triangle unit of my geometry curriculum. I will integrate experiences, stories, and fellowship findings as we identify various triangles and form conclusions about their angles and sides. The unit begins with identifying and classifying isosceles, equilateral, scalene, right, obtuse, acute, and equiangular triangles. We then move into triangle theorems and corollaries including the Triangle Sum Theorem, Isosceles Triangle Theorem, and Equilateral Triangle corollary. Instead of simply being given examples and explained how they work, my instruction in this unit will be transformed by this fellowship, giving students the opportunity to step into the virtual reality world of triangles in Thailand and discover for themselves.

Using VR headsets, students will explore the virtual reality environments I created while in Thailand. Working in groups, they will locate, identify, and classify the triangles we have learned. When they find a triangle in the architecture, their partner will confirm their identification and classification, and check it off a provided rubric. Each student will sketch the triangle in their notes for future reference. For students struggling with understanding, a scaffolded reference sheet will be provided. As students explore the VR environments, I will teach my students what I have learned about the culture and history of the places we are investigating, creating an opportunity for cultural connection and a global digital "field trip" from within the walls of our own classroom. Throughout the unit, we will dialogue with our connections in Thailand, with students at an international school in Bangkok through FlipGrid, and over skype or email with a currently serving Peace Corps Volunteer.

As we move into studying triangle theorems and corollaries, students will focus in on specific architectural structures they discovered in the VR landscapes. They will choose an example of architecture for each theorem, using photos taken from the same landscapes as the VR environments. Using the software GeoGebra, they will import their chosen photo into a digital work page. Then, using digital measuring tools, students will explore the angles and sides lengths of the triangles in their architecture. They will discover the theorems about angles in triangles, base angles of an isosceles triangle, and relationships between sides lengths and angles. They will conclude by sharing and comparing their findings with classmates who chose other architectural triangles, thus universalizing the theorems for triangles. With these activities, my fellowship in Thailand will transform what in the

past has been a series of lessons and notes that students do not connect to in a deep way into an immersive, exciting, cultural and mathematical discovery!

Later in the year, my fellowship will be revisited when we reach our unit on 3-dimensional figures. Students will now search my VR landscapes for examples of 3D figures including spheres, cones, pyramids, and prisms in the modern architecture of Bangkok. Using a similar rubric as the one used during the triangle unit, pairs of students will hunt for 3 dimensional geometric figures in the city's modern architecture. We will explore and discuss the differences in the geometry used in the architecture of ancient Thailand in Chiang Mai, and modern architecture in the city of Bangkok. I will share my learnings about the history and culture of the city, and we will continue our conversations with our new friends in Thailand. This unit will culminate with each student designing and creating their own 3-dimensional "skyscraper" to add to our own classroom version of a Bangkok "skyline." Using the 3D design software Tinkercad, students will design their skyscraper including the figures from the unit. Students will personalize this project to a large degree, allowing for varied levels of depth and complexity, and moving through the design process at a self-guided pace that accommodates each learner's individual needs. When finished, I will use our school's 3D printers to print the students' figures, displaying their creations in our class skyline.

As an extension, interested students will be invited to compare and contrast the Bangkok skyline with the skyline of our own city in the US, analyzing the geometric figures present in both. The opportunity will also be given to them to use Tinkercad to make a skyscraper similar to the ones in our city as well, thus bringing their learning full circle, and exploring the similarities and differences between our city and the metropolis of Bangkok.

Team

Our team of teachers will infuse their current standards-based arts curricula with the traditional techniques, styles and movements gleaned from our studies in Cuba as well as implementing individual week-long units of Cuban Cultural studies in Dance, Art and Music. A Slideshow Presentation will be created using the photographs and videos taken of each of the events, workshops and performances that the teachers are involved with during their stay in Cuba. This will serve as documentation and guiding narrative of our exchange for students to see and hear. Students from Art Class, Dance Class, and Music Class will gather in the Auditorium to view and listen to the introductory presentation. Students will have ample opportunity to ask clarifying questions and document their learning by use of a reflective on-line journal. On day two, students in each of the three classes will dive in deeper into their specific arts discipline in their respective Arts classrooms.

In the Visual Arts class, students will study the seven Principles of Design, focusing in particular on Rhythm, Pattern, and Unity through Repetition. Specific photos from Cuban Artists will be used to demonstrate the new vocabulary. Students will then view the short video of American Artist, Mellissa McCracken, that has Synesthesia (the ability to see sound) and record their reflections using the online journal for the project. Students will then be asked to listen closely to samples of traditional Cuban music of Salsa, Rumba and music for the Orishas. Students will then pick one of the three samples to listen to independently while beginning to design their composition using paint as their media.

Students will be asked to record a daily reflection in their on-line journal for each day of studio time devoted to the project. A gallery walk of finished paintings will include simple post-it notes from each student identifying what each viewer likes about the painting and what they notice (especially using the vocabulary of the seven principles of design). Each student will then take their painting and all the post-its and record the notes using their online journal and post a photo of their artwork(s) corresponding to the comments/critique. Students will have the opportunity to try different music styles (one pop song of their choice, one jazz song, and one folk song) to create additional paintings on consecutive days. The Cuban music inspired pieces will be displayed in our final culminating event; Caribbean Day. Students will have an opportunity to meet individually with the art teacher during his weekly Portfolio Review where students are given the opportunity to discuss their work, share evidence of their reflection journal and use a simple rubric to give themselves a grade for their series of paintings in the unit.

In Dance class, the Cuban Rhythm Unit will focus on students examining the many root influences and aspects of traditional Cuban music and dance, and making connections between their own popular dance styles such as Hip-Hop, Break Dance and even the dances popularized by their favorite video games! Students will view short video clips demonstrating traditional Cuban Folkloric Dances while recording their reflections using the online journal for the unit. They will be asked to identify specific rhythms and will practice identifying these same rhythms by traditional call and response while the teacher randomly performs set rhythms. On consecutive days, students will view video clips of traditional West African, Congolese, Native American, and European Folk Dances while recording their reflections using the online journal. They will be asked to analyze and discern how these traditional cultural dances contributed to the Cuban Folkloric Dances. Students will then learn and practice some basic Cuban dance steps, rehearsing with the teacher in large and then small groups. Each group will perform their steps for the other students and eventually will be assigned to add on a short sequence (16 to 32-counts) of their own group's choreography, thus creating their own fusion of traditional and creative movement indicative of the Cuban style. The advanced class of 8th graders will probably be able to produce a longer sequence or possibly a complete dance piece. A final performance with simple unifying costumes for each group will be practiced and rehearsed for the final culminating event, "Caribbean Day." Video of the performances will serve as documentation of the student's accomplishments and students will have the opportunity to reflect in their online journals about their group's process and final project. Students will use a simple rubric to assess their process (critical thinking, working together, problem solving) and their product (their final performance) and their reflective journal.

In Music class, students will watch and carefully listen to clips of traditional music from West Africa, the Congo, and Spain. Then students will see three clips of Cuban music that incorporates instrumentation and rhythmic styles from these cultures. After discussing different musical elements as a class, students learning will be assessed with an exit ticket stating two things they learned about Cuban music. Some responses can be discussed the following day. Students will then gain hands-on experience practicing on Latin percussion instruments that are already in the classroom but not being utilized. For several days, students will try out different instruments such as claves, congas, güiros, cajóns, shakers, wood blocks, shekerés and cowbells. Students will practice performing basic polyrhythms and call and response chants. Students will eventually be assigned a particular

instrument. Students will then be given the opportunity to improvise their own rhythms over the group polyrhythm as well as create their own call and response chants. Each group will perform their Afro-Cuban polyrhythm, rhythmic improvisations, traditional call and response as well as student created all and response chant in the final culminating event, "Caribbean Day." Video of the performances will serve as evidence of their accomplishments. They will have the opportunity to reflect on their performance through a concert reflection writing assignment. They will be graded with a rubric that assesses their process of group work, critical thinking, problem solving and self-reflection.

Student Growth and Learning

- How will students benefit from your proposed fellowship, both in the classroom and beyond?
- What new, authentic and engaging additions will this experience bring to your classroom?
- What are the learning outcomes for your students?

Individual

Ecology and evolution will be presented in a new dynamic and interactive way for students. Few students have had the opportunity to travel internationally and to engage in biology as a field experience. Teaching evolution and ecology can be quite difficult because of the disconnect and lack of exposure to nature due to students' limited experiences living in a developed suburban area. Students today require an engaging classroom and providing them with a virtual reality experience, as well as a real-life connection with a field scientist, will guarantee student engagement and interest. The immersive nature of this fellowship will allow students to virtually travel to locations otherwise out of reach. The students will be able to see and hear real evidence of Earth's changes over millions of years through artifacts such as fossils, 360° video recordings of the hikes along the Burgess Shale, interviews with experts in the field, photos, and data from participation in current, real life research going on every day. Students will develop professional communication skills as they connect with scientists. They will be able to witness the scientific method in action as scientists are constantly asking questions and exploring different possibilities through observations, research, data, and drawing conclusions. Through these various activities, students' eyes will open to global community efforts and the teamwork involved in scientific research as a whole and students will gain an appreciation of the value of collaboration, including indigenous knowledge. Instead of using hypothetical ecological relationships to learn about interactions between organisms, students will be given the opportunity to see real organisms or evidence of real organisms collected from the numerous hikes and virtual reality experiences. This data taken in the form of a digital journal and 360° videos, will allow students of all ability levels and learning styles to connect with real ecosystems and infer how organisms are interconnected in various habitats. This firsthand knowledge will promote environmental awareness, connectedness, engagement, and foster improved learning outcomes. It is apparent that students need more connection and interaction with the content than what is currently being offered in my current biology class and this fellowship will allow me the opportunity to do so.

Team

We've recognized a disconnect between students' hard work on this project (high!) and the satisfaction we feel after looking at their finished products (low.) We know that our students are capable of more than scratching the surface of a human impact topic through google searches, but our current method facilitating a deeper experience for our students has room for growth. In bringing our photos and video, personal anecdotes, first-hand accounts, directly to our students, we hope to bring what was once distant near, what was once strange familiar. For students, photo and video of their teachers experiencing these different ecosystems-- walking on real glaciers pointing to evidence of recession over time, tromping through boreal forests and tundra, visiting permafrost outcrops off the highways-- will be far more powerful than our current Google image search suggestions. Not only is this type of learning beneficial for engagement, but it is also essential for differentiated learning through multiple modalities. Most importantly, and most uniquely, collaboration with indigenous communities in Alaska will put real faces to the concepts we teach. Our school is located less than a ¼ mile away from The National Museum of the American Indian. Prior to starting the project, we would take a field trip to the museum to gather background information about the Iñupiat, Yupik, Aleut, Eyak, Tlingit, Haida, Tsimshian who live in Alaska. Students will experience the museum in New York in concert with exposure to indigenous populations from our interviews. This combination would be wholly impossible without the assistance of this fellowship.

A key understanding of this unit is "Human activities have significantly altered the biosphere, sometimes damaging or destroying natural habitats and causing the extinction of other species. Changes to Earth's environments can have different impacts (negative and positive) for different living things." (NGSS) This is an overarching science concept which in the past has gotten lost in our teaching as we focus on the literacy and communication skills it takes to complete this process. Our work in Alaska will ensure this understanding is front and center. We want students to engage with complex graphs and analyze their data to make arguments, evaluate, and communicate ideas about climate change. Gathering this data from our sites in Alaska will ensure there is meaning behind the numbers the graphs portray. Ultimately, we want students to complete this project grappling with and practicing more science.

Finally, the information we gain from our experiences will help us develop a broader range of case studies for our students to pursue, spark curiosity in the world beyond our classroom, and build their sense that climate change matters to real people and real ecosystems. In doing so, we will push our students to share their learnings with members of our community. Either through a new Science Night where they will present their work, or a small homework assignment where we will ask them to act as ambassadors of science to their parents. Students will gain practice communicating ideas through presenting their work to their parents, and practice refining and reflecting on their ideas as parents are prompted to ask questions. Taking this project a step further in this way may be the extra push many of our students need to fully engage in the world as responsible, scientifically literate, global citizens.

Benefits to school Community

- How will your fellowship experience contribute to your school community's efforts to engage

students in authentic learning and problem-solving?

- How will new structures or processes take shape?
- How will you engage parents and the broader community as partners in supporting student success?
- How will you share your fellowship learning with colleagues?

Individual

My school, similar to many schools with a large English language learner population, struggles to weave language and content instruction together in order to close the achievement gap that persists between English language learners and their native English-speaking counterparts. With increased Spanish proficiency and cultural understanding, I will be able to coach colleagues and lead professional developments to help our community of educators improve academic outcomes.

Every week we engage in professional development, often led by teachers. This would give me plenty of opportunity to support my colleagues. For example, I could lead professional development that dives into linguistically relevant pedagogy and what second language acquisition looks like in the classroom. Furthermore, I want to train my colleagues on using more translanguaging strategies in the classroom when there is an increased level of knowledge of second language acquisition. With a stronger level of proficiency in Spanish after this fellowship, I would plan to contribute more to my school community by starting an afterschool Spanish club to teach Spanish language, literacy skills and Latinx culture with another English as a Second Language teacher that speaks Spanish. Research suggests that students who are literate in their first language are able to make progress at more rapid rates than students who are not literate in their first language, which is why starting this club would be important for me to support students whose first language is Spanish, but are not literate in their first language. Being able to read, write, speak and listen in students' first language is also crucial for positive identity development and for strong relationships with their communities. Ever since the implementation of the English only laws in the early 2000s, many communities have felt that children who go to English only schools lose their first language and become very disconnected from the community. I hope that this club would help foster a positive bilingual identity as well as give students the tools to connect more deeply with their communities back at home. The club would also be open to anyone wanting to learn the Spanish language and Latinx culture, which would help spread cultural appreciation and understanding among students who do not identify as Latinx. My new knowledge of Spanish and Dominican culture would also expand to my volunteer work with organizations in my school community, and create new programming and support groups for native Spanish speakers. This will increase participation of families and caretakers that speak Spanish in these events hosted in the community, and with a stronger relationship based on understanding and trust after attending these events, at school as well.

Team

This fellowship will benefit our students as much as it will benefit our colleagues. We will return from the conference with a much clearer understanding of best practices for meeting the needs of our incredibly diverse student population. The conference will address ways to encourage students'

perseverance, adaptability, collaboration, cooperation, and compassion. All skills that are important for our students to succeed.

We teach at schools that embrace a growth mindset for both teachers and students alike. The district as a whole is incredibly supportive and encouraging of teachers to continue their education formally or informally and bring that new learning to their respective buildings. Our school year always begins with professional development that is presented by teachers within the district and conveys new learning developed in our time off. Teachers are given the option to attend development sessions that they feel most strongly about or that provides the greatest utility for their teaching. Upon completion of the fellowship and prior to returning to school for the 2019-20 school year, we will meet with our principals to share with them our learning and ways to implement best practices into our respective schools. At the start of the year we will present an official professional development for those in our buildings interested in our new learning. We will also put together a brief, formal presentation for both of our staffs, quickly highlighting our major gains for those who do not attend our professional development. We will compile our resources into one common Google Folder that any staff member in the district has access to so teachers and staff can use them throughout the year.

Both schools employ teachers who are often arriving to school early or staying late to make time to extend their learning through their colleagues. There are informal “Lunch and Learns” a few times a year, where teachers present during lunch in a casual setting. We see these authentic causal learning experiences outside of the required meeting time as golden opportunities to impact our school community.

Beyond the classroom, an equity stance builds a community relationship. This conference will provide necessary insight into ways that our school can reach out to community partners to express our equity mindset. By incorporating the community and demonstrating that education is a collaborative process, we can earn the trust of parents and partners and in turn harness that trust to positively impact student engagement and learning. Often, schools fail to incorporate communities in their goals. When the goals of the community do not meet the goals of the school, an antagonistic relationship forms. We hope that by demonstrating our equity stance we can create long lasting and meaningful relationships with the community that we serve. Prior to departure, during our fellowship, and continuing on after our return, we will keep a blog, Twitter handle, and Instagram account that provides information on our equity efforts to allow our students, colleagues, administrators, parents, and community partners to follow our learning. We feel strongly that all stakeholders should be included in our experience and learning with us. Using multiple digital platforms will let us reach the largest audience in our community as possible. Using social media, we can create a network that includes our school, our community partners, and the conference attendees and speakers who can continue to share new learning beyond the conference.

Budget Narrative

Provide a brief narrative showing evidence of thoughtful planning and research supporting your specific itinerary. The narrative should explain your rationale for the project's expenses; stipulate a time frame and approximate costs as closely as possible.

If including a technology expense: Specify why the item is necessary for the fellowship's success, why you have chosen the specific brand/type, and whether you have prior experience using the technology. Technology expenses should not be the bulk of your proposed budget, but a necessary tool to successfully complete your fellowship.

Food costs should reflect actual destination rates and cannot exceed \$50 per day/per person.

Individual

Much internet surfing has been done to research the best and most economical way to complete this project. Booking.com, CheapOAir.com, Tripadvisor.com and my new favorite, Google Flights have been my go-to online resources. I was also introduced to the apps Skyscanner, Hopper and Kayak to help with planning and travel. Google Flights has given me a quote of \$1700 for flight travel. I was able to adjust travel days to find the least expensive flights. There will be other travel expenses as well such as trains and busses between cities to consider. And, while there will be plenty of free walking, there will be times when an Uber, taxi, subway system will be needed. For these travel expenses, I have budgeted \$385. The majority of this money is for traveling from city to city.

I am fortunate to have loyalty points for a major hotel chain, Hampton Inn. Since this is my first time broad, I feel safe and comfortable in this familiar hotel. It is a bonus that they serve breakfast. Being able to use my loyalty points reduced the average cost to \$140 a night for a total of \$2000.

Every effort has been made to visit free or inexpensive attractions in each location to film or photograph. With \$200 budgeted for this category, some of the attractions and landmarks include: The Eiffel Tower, Notre Dame, The Louvre, The Globe Theatre, The London Eye, A Celtic Dinner/Dance, The Titanic Museum, Day Trip to Inverness/ Loch Ness, and the Edinburgh Castle. Each of these locations coordinates with a Magic Tree House title.

The meal budget is conservative as breakfast is included with the hotel. This allows a "taste" of each city using local cafes and diners. For meal expenses, \$40 per day or \$560 total was allotted.

Finally, in order to bring these locations back to my students, I have budgeted \$155 for a DJI Phone Camera Gimbal OSMO Mobile. The easy to use Gimbal is simply a handle of sorts that allows a smartphone to operate more like motion camera making filming more professional and less shaky, similar to a GoPro. This high tech "selfie stick" enhances the already great technology in my personal iPhone. It, of course, would return to my school where my morning show news crew would be able to use it. They would be ecstatic!

I have budgeted \$500 personal funds to cover any additional expenses that may be incurred.

Team

In order to estimate the costs of our fellowship, we used various websites such as ricksteves.com, kayak.com, and tripadvisor.com to research the price of airfare, lodging, food, and other types of transportation for our fifteen-day trip. After thorough research, we estimate that airfare from Houston to Prague, returning to Houston from Stockholm, Sweden will be \$1500 per person. While it is less expensive at the current moment, since we will not receive the funding until April, prices will continue to rise the closer we get to the trip. A plane ticket from Prague to Birmingham Airport will cost \$150 per ticket (including the cost to check a suitcase). We will take a train from Birmingham to Leeds, UK and that will cost \$30 per ticket. Plane tickets from Leeds to Stockholm are \$160 each. We have also considered the cost of airport transfers, buses, taxis, and trams and estimate that all of these will cost approximately \$110 per person. The total cost for transportation is \$3900.

Lodging: Hotels in Prague, Czech Republic are quite affordable, and we have budgeted \$125 a night for the five nights in this city (\$625 total). The cities we will be staying in within the United Kingdom are also budget friendly. After comparing prices on tripadvisor.com we have allotted \$120 a night for the five nights in the UK. In Stockholm, hotels are more expensive, and we have budgeted for \$165 a night for four nights (\$660 total). The total cost for accommodations will be \$1885.

Food: Food in Prague is affordable, and the average cost of a meal is \$10 including a drink. For Prague we estimate that we will each need \$30 a day (\$360 total). In the UK, food is a bit more expensive, and it will definitely cost us each at least \$50 a day for breakfast, lunch, and dinner (\$500 total). After researching the price of food in Stockholm, we discovered that food is more expensive here than in any of the rest of the cities we will be visiting. We are requesting \$50 per day for meals while we are in this city as well (\$400 total). All in all, our food cost is \$1260.

Participation Costs: The Creativity Workshop in Prague costs \$1395 per person (\$2790 total). The Curiosity Approach will cost \$250 total for the trainings and observations. James at the Nursery Nook has offered his trainings at zero cost, as we have agreed to an interview with him about preschools in America to help him with research he is conducting for a book. The retreat with Suzanne at Interaction Imagination will cost \$460 total. The participation cost total is \$3500.

We are not asking for any resources or materials. The total cost for our fellowship is \$10,545. While this is over the \$10,000 maximum, we will gladly pay for any cost that exceeds that.