[redacted]

1. Contact Information

Title: Ms. **First Name:** [redacted]
Email: [redacted]

Home Address
Street: [redacted]
City: [redacted]
State: [redacted] **Country:** UNITED STATES
Home Phone:
Cell Phone: [redacted]

School Address
School Name: [redacted]
Street: [redacted]
City: [redacted]
State: [redacted] UNITED STATES
School Phone: [redacted] **Extension:**
School Fax: [redacted]

School Website: https://sites.google.[redacted]rial-junior-high-school/
Other relevant websites:
www.[redacted]
www.facebook.[redacted]
www.youtube.[redacted]
Instagram: [redacted]
Snapchat: [redacted]

Principal's Name: [redacted]
Principal's Email Address: [redacted]

[redacted]

2. Demographic Information

a. Gender: Female
Race/Ethnicity: [redacted]
b. Citizenship: United States

c. Briefly describe your school (or the audiences you work with) and surrounding community:
The [redacted] community. Based on per capita inco[redacted] of the poorest counties in the United States. [redacted] Title I school. Ninety-nine percent of our population is labeled as economically disadvantaged. We have a large Limited English Proficient population which means we qualify as a Title III school. Fifty-five percent of our population is labeled as "at risk" of not graduating. We also have a large Native American populatio[redacted] Tribe of Texas. One hundred percent of our students receive a free lunch. Most of them have access to the internet at home through a smart phone, but very few of them own a computer.

d. Type of School (or students you work with): Public
Other Type of School:

e. What is the population of your school (estimates are fine): 1077

f. School Ethnicity
1**% - American Indian or Alaska Native:**
% - Asian
% - Black or African American
99**% - Hispanic or Latino**
% - Native Hawaiian or Other Pacific Islander
% - White
% - Multiracial
If your school uses other categories to describe race/ethnicity, please describe:

g. Percentage of students who receive free or reduced lunch 100 %
h. Average Class Size: 26
i. Total number of students you teach in a year: 140

j. If known, what are the approximate start and end dates of your school year? Include major vacation periods. i.e. Christmas break, summer break, etc.

Start: August 19, 2019
Christmas Break: December 20, 2019 - January 6, 2020
Last day: June 5, 2020

[redacted]

3. Teaching Experience and Education

a. What type of university degree or other academic experience or qualifications do you have?
Bachelor's Degree (Major): Wildlife and Fisheries Sci[redacted]
Bachelor's Degree (Minor):
Masters Degree (Discipline): Education, [redacted]
PhD Degree (Discipline):
Other Degree:

b. How many years of teaching experience do you have: 13
c. How many years have you been teaching at your current school: 13

d. List up to 5 relevant professional licenses, certifications, registrations, awards or honors that you have received for your teaching:

National Geographic Certified Educator Pre-AP Science Certification
Ocean Exploration Trust Educator at Sea
JOIDES Resolution Education and Outreach Officer
Outstanding Teacher Presentation Award, Geological Society of America, [redacted]
[redacted]hool District Teacher of the Month, February 2015

4. Teaching Assignment

a. What is your primary teaching assignment:

- Middle School (Grades 6-8)
- Gifted

Other Primary Assignment:

b. What subjects do you teach? Check all that apply:
Middle School Science

Other Subjects:

[redacted]

5. Motivation

a. What motivated you to apply to PolarTREC? What do you hope to gain from the experience:

I want to encourage my students to investigate the world. Students at this age are thirsting for knowledge. By participating in PolarTREC, I will bring real, current scientific exploration into my classroom so that my students will feel actively engaged in scientific research. This will awaken within my students and the general public a desire to explore the world and prevent them from feeling removed from science. Bringing the Arctic or Antarctic into the classroom will expand the scale of the world around them and allow them to formulate questions to gain a better understanding distant lands and fragile ecosystems. Questioning what they observe is the best way to learn. These experiences will awaken the scientist within them. I also wish to inspire my students and community. Many of my students believe that they will live the[redacted]They need encouragement to think outside the box. I try to bring my travels and experiences into my classroom to push them to imagine greater things in the future, including a college education and travelling the world. Travelling the world, even virtually, is the best way to learn different perspectives and gain understanding of various cultures and ecosystems.

b. Aside from journaling/blogging, online photos, and webinars (all part of our program requirements), describe your ideas on how you will share this experience in your classroom or with the audiences you work with:

It strikes a deeper cord with a student when they know their teacher has been out in the field and has brought back examples that illustrate concepts. I am also a strong believer in involving the general public in current science research and field expeditions. While an Educator at Sea aboard The Nautilus I found that answering the public's questions made them feel like they were exploring with us and while an [redacted]er onboard the JOIDES Resolution, I honed my skills of explaining complex science concepts to students of all ages. In 2015 I introduced a mascot into our classroom. Students follow a [redacted] allows me the opportunity to share adventures and integrate real world science into their everyday lives, even on days we are not in school. Recently I have become a National Geographic Certified Educator and learned video editing skills and am perfecting my ability to tell a story. I share these videos with my students [redacted]. Social media is currently how students communicate and the more interactive the experience for my students, the more I can integrate research in the field and learning in the classroom.

c. Describe how you envision sharing your experience with other educators, your community, and the general public:

One way to get others completely involved is through interaction. In order to fully immerse them in the research, they need to participate. I want them to ask questions, hypothesize, and investigate with me on my trip. This can be accomplished by allowing them to interact remotely with me and the research team. We can have the public submit questions through social media and then answer them through a blog post or video responses. We can conduct interviews with researchers so that the public can become more

familiar with their background. In the past I have brought scientists into my classroom remotely with my "Ask a Scientist" project. Students were able to ask content area questions, but they also wished to know about the researcher's background and education. I would like to incorporate this type of interaction if chosen to participate in PolarTREC. The public can get to know the researchers, the research, and learn how scientists draw conclusions based on data collected. Through this type of participation, they become part of the research team. I would also hope to present my expedition and lessons I have developed at conferences such as GSA and AGU, as I have previously.

d. Describe how you currently engage students and facilitate learning when teaching new and complex topics, concepts, or issues:

Students need to be engaged and experience science so that they not only retain knowledge, but they can analyze it and build on it in the future. By bringing real world science experiences into the classroom my students will have a personal connection to science and be able to relate its importance to their own lives. While aboard the JOIDES Resolution two microbiologists and I collaborated on a project that brings scientists into my classroom and takes my students out into the field aboard a small ship, the R/V Katy. After receiving funding for our 3 yea[redacted]ted our classroom in the fall and we took a trip out to the Rio Grande River where students did water testing and grew microbes on petri dishes. We then visited Port Aransas, Texas in April with [redacted]and collected animal specimens from the ocean and beach. Students were able to compare our Rio Grande plains ecoregion to the Texas coastal ecoregion and collect data in the field. Textbooks can make current scientific exploration feel so far removed. The hands on activities I provide have a much greater impact than traditional teaching.

e. Describe the particular strengths you would bring to the PolarTREC program and to a field research team:

I have experienced field work and assisted research teams in multiple programs. Through G-Camp 1 and 2, I participated in two 17-day geology camps for teachers where we traveled through Texas, New Mexico, and Colorado, collected rock samples, learned geology, and developed classroom lessons. In 2013 I traveled on board Dr. Robert Ballard's E/V Nautilus as an Educator at Sea where I worked in the control van fielding questions that came in from our live streaming website. I explained what the team was doing during transits as they used a multibeam mapping system and explored hydrothermal vents 4,000 meters below the surface of the Caribbean Sea. In 2015 I spent 2 months aboard the deep sea drilling ship the JOIDES Resolution as an Education and Outreach Officer along with 3 other educators. I conducted webcasts with classrooms around the world, developed curriculum, and put together sample kits for teachers. I also developed relationships with onboard scientists who still interact with my students today. As a member of an expedition I worked very hard at understanding difficult concepts so that I could better explain them in simple terms to students of all ages and the general public.

f. Using examples from your own experience including your role and the contributions you made to a team effort, describe how you work as a member of a team:

During Expedition 360 aboard the JOIDES Resolution I was part of a 4-person Education and Outreach team. We created curriculum based on expedition research, handled media inquiries and interviews, produced podcasts, videos, blogs, and social media posts and wrote our portion of the science report for

the International Ocean Discovery Program.
Being part of a team during a 2-month expedition aboard a ship that is working nonstop can be challenging. For example, at the beginning of the expedition we had trouble keeping track of our social media posts throughout the various shifts that ran 24 hours. We created a daily calendar and determined the most beneficial hours to post on the different platforms to increase engagement. We then split up the duties of posting and wrote down what we had posted about so that we were each contributing without being redundant. It was because of our ability to work as a team that we accomplished so much. We recognized each other's strengths and weaknesses and we took equal share in the work load. We understood that it was important to be open to constructive criticism and we concentrated on the broader impact of our work together.

[redacted]

6. Journaling

a. A large component of the PolarTREC experience involves communicating daily events from the field via an online journal and the researchers rely on the educator to convey their science. Please submit a sample journal describing the most important or interesting day you had last week. Write your journal entry for the general/lay audience (200 words maximum):

A big part of Expedition 360 happens in a small corner of one of the labs on F Deck. Here you can always manage to find one of our resident microbiologists, Virginia Edgcomb or Jason Sylvan, on the hunt for microbes.
Ginny and Jason's job starts when the announcement of "Core on deck!" comes over the intercom. They suit up and make their way upstairs to the core lab. The team does their best to reduce the risk of contamination and Ginny and Jason wear masks so that no foreign microbes come in contact with the piece of core.
When they choose a core Ginny says they look for any area that could have been exposed to water. This could be a good home for microbes.
Anything at the center of the core has not been exposed to drill fluid on its way back up to the JR and will provide them a pristine sample of rock.
Some of the samples are used to look for DNA, which tells us who is living in these rocks, and for counting how many microbes are present.

Li[redacted]

[redacted]

7. Scientific Interests and Research Area Preference

a. Where would you prefer to go on an expedition: Either
Please explain your preference

I am eager to learn, research, and share my experience with my community in either the Arctic or Antarctic. My goal is to bring my students and the general public into a world unfamiliar to them, a world that will bring out the scientist within them and inspire them to explore for themselves.

b. How long would you prefer to participate in an expedition? (Most expeditions are AT LEAST three weeks.) List any dates or periods of time when you are NOT able to participate in a field expedition:
I am open to all lengths of an expedition.

c. Briefly describe your scientific interests. Which scientific topics interest you the most and why:

While the 7th grade science [redacted] more on the life sciences, it also incorporates many disciplines. I am eager to explore how these subject areas affect one another and how I can illustrate that to my students. Because of my background in wildlife and fisheries sciences I am personally more interested in studying life in terrestrial, biotic, or marine systems, but I am very much fascinated with how life interacts with the abiotic system around it. In order to truly understand how our world works, students must realize that everything is interconnected. The geology of an environment affects the atmosphere which affects the living organisms. Our world works as a fascinating unified system.

d. Rank your interest in participating in the research areas listed below.
1. I would really enjoy an expedition in this subject area; 2. I am somewhat interested in this subject area; 3. I do not want to be considered for an expedition in this subject area

Atmospheric Systems I am somewhat interested in this subject area

Cryospheric Systems I am somewhat interested in this subject area

Human and Social Systems I am somewhat interested in this subject area

Marine Systems I would really enjoy an expedition in this subject area

Terrestrial Systems I would really enjoy an expedition in this subject area

Ecology and Biotic Systems I would really enjoy an expedition in this subject area

Physics or Space Sciences I am somewhat interested in this subject area

Engineering and Technology I am somewhat interested in this subject area

Other (please specify)

Other Areas of Scientific Interest:

e. Are you applying to work exclusively with a specific researcher? If yes, please list their full name, institution, and email address :

8. Background Information and Skills

a. Briefly describe your outdoor skills or experiences:

I love hiking, biking and I am trained in canoeing. I studied abroad in South Africa while in college. While there we camped, hiked, and studied wildlife and the benefits of ecotourism. The geology camp in which I participated involved long demanding hikes where we examined the geology of the area and collected rock samples. Two summers ago I participated in the DIG Field School where we spent a week camping in the hot Montana desert while we searched for dinosaur fossils.

b. Provide a basic statement of your general health and physical condition. Finalists will be asked more detailed questions about their health and ability to participate on a specific expedition by the researchers during interviews. Medical services may be limited in remote field sites and some expeditions may require a medical exam.
I am in good physical health and exercise a few times a week.

c. Briefly describe the computer type and operating system (Mac / PC) with which you are most familiar and your skill level:

I consider myself technologically savvy. I have been using computers for over 20 years. I've been trained to use devices for webcasts, online question and answer portals, scheduling programs, general instructional software like Powerpoint or Flipchart and presentation tools like projectors and audience response devices like Qwizdom. I am a photographer and most recently I have delved into video editing. I am eager to learn new skills.

d. Briefly describe the technological devices and software you use on a regular basis and how you utilize these tools personally and professionally:

I am very familiar with presentation software like PowerPoint and Flipchart. I regularly integrate the internet into lessons and I use Qwizdom to poll students or monitor their progress on an assignment. I am a skilled and award winning photographer which has allowed me to be familiar with Photoshop. I use this skill to share my field experiences with my students in class as I stay active on social media during trips so that my students can follow my journey through photographs and written text. I can compile video footage, edit, and add sound or music using video editing software including Shotcut or iMovie.

e. List any additional skills or information that you wish to be considered:
I speak conversational Spanish.

[redacted]

9. Previous Applications & Participation

a. Have you previously participated in a teacher research experience (e.g. NOAA Teacher at Sea, ARMADA)? We do not accept applications from PolarTREC alumni.
Yes
If yes, please list the year, location, and program name:

[redacted]each

If yes, did you complete all program requirements: Yes
If yes, how do you see the PolarTREC professional development opportunity continuing to develop your professional skills, or how will it build on your previous research experiences:

PolarTREC would allow me the opportunity to bring another field of science to the general public in a way that they can comprehend. My experiences have revealed skills within me that allow me to disseminate current research to the general public in a way that they will find it relevant to their lives. For example, while aboard the JOIDES Resolution, I was trying to think of how I could explain a mass spectrometer to kindergarten children in a way that they would understand. While giving the class a tour of the chemistry lab aboard the ship, I realized it was similar to why fireworks are different colors and explained to the students that this is how they identify elements or ingredients in the rock. It is this kind of opportunity that I am looking for within PolarTREC. I am excited to further develop my skills and compare my experiences at sea to those in the polar regions. I will be able to build on my field experiences while collaborating with scientists and build my content knowledge, the content knowledge of my students, and community.

10. Training and Orientation

Are you available to attend the PolarTREC Orientation, tentatively scheduled in February 2019?
Yes **If no, please explain:**

11. How did you hear about PolarTREC?

Email listserve:
Friend or colleague: [redacted]
Former PolarTREC, TREC, or TEA teacher:
From a website:
Conference or presentation:
Other

b. Please suggest other places we might advertise this opportunity for teachers:
Science Teachers Associate of Texas

[redacted]

12. References

Reference 1.
Name: [redacted]
Title and affiliation: Professor of Geology, Cardiff University, Co Chief Scientist Expedition 360
Email Address: [redacted]
Phone Number: [redacted]
Is this a home or work number: Work

Reference 2. Name: [redacted]
Title and affiliation: Assistant Professor, Department of Oceanography, Texas A&M University
Email Address: [redacted]
Phone Number: [redacted]
Is this a home or work number: Work

Reference 3. Name: [redacted]
Title and affiliation: Manager, [redacted] IODP
Email Address: [redacted]
Phone Number: [redacted]
Is this a home or work number: Work