## Project Justification

The project category "**Transforming School Library Practice**" is multi-purposeful and will address several needs and opportunities for the students enrolled in Freedom Public Schools. Freedom is a small, rural, isolated district located in northwestern Oklahoma with 60 students PK-12th grade. The free/reduced lunch rate for the district is 74% and the poverty rate is at 32%. A recent home survey indicated that few students have computers or internet access at home due to the isolation of the community. It is difficult to challenge students due to the size and funding limitations of the district. The proposed project will address three specific areas. First, the purposeful integration of information technology and digital resources will develop relevant 21st century skills required for today's student. Next, funding will allow for reconfiguration of the school library literacy, math, and science skill development required for critical thinking and application of knowledge. Finally library access will extend beyond the traditional school hours to enable additional meaningful and deep learning opportunities for students within an afterschool program.

The staff consists of thirteen teachers, two cooks, two secretaries, one principal, one superintendent, one janitor, one maintenance person, and one certified librarian. The library includes a computer lab, offices and an AV storage area. The library has 3,000 square feet of space which will be reconfigured to support a Makerspace and supplies and materials to expand the science, math, technology and art programs (STEAM).
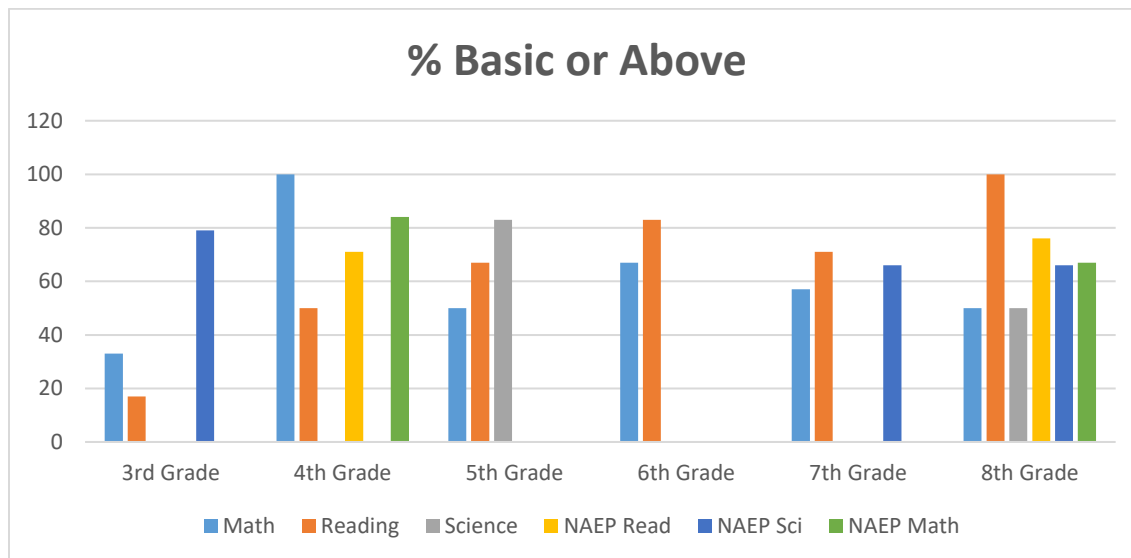
The chart above shows our state OSTP scores for 2018 compared to the last NAPE tests for Oklahoma, due to the fact that our state does not have overall data released at this time. Since NAPE was based on Basic or above all data is based this way. When looking at Basic and below our percentages are very high for students who are not proficient which is what we would like our students to strive toward. Compared to other schools our numbers are skewed because we are so small; however, as the data shows even though we have raised a letter grade this year, we still have a lot of work to do and need a lot of

change to make this happen. For example, our 8th grade reading is at 100% when looking at Basic and above; however, only 37% are proficient and no one is advanced. When looking at our report card this year, our academic achievement is still way too low with a letter grade of a "C", even though our growth grade of an "A" brought our overall grade up. We are working hard and have brought in programs to help along with more professional development. We need that extra edge to help our students gain added instructional time that is beneficial, engaging, and builds problem solving and cooperative learning into focus. This grant would aid in making this a reality for our students.

Project Work Plan

Digital resources will be purchased and will include iPads and Kindle readers. Many free eBook apps are available, but the devices and subscriptions will further these resources. A reading and listening space will be provided in the corner of the library to encourage literacy engagement. Subscribing to audiobooks will be part of this project and will include apps such as Audible and Learning Ally. Research states that providing access to audiobooks will support reading skill development and will allow students to hear explicit sounds of letters and letter patterns that form words. Audiobooks will help students engage in text and gain exposure to more words, ultimately improving vocabulary, comprehension and critical thinking skills. Audiobooks are a great resource to encourage independent reading.

Supporting Research: Literacy leadership in the school is an important component with changing roles and responsibilities (Calo, et. al., 2015). Graham and Hebert present empirical evidence that writing improves students' reading comprehension (2012). In "Storytime in a Digital World," the careful selection of high-quality materials and supportive technologies can help enhance student engagement, identifying resources that support students' creation of their own eBooks to foster students' reading abilities (Paganelli, 2016). Technology is aging and many Freedom students lack at-home technology access. Teachers need technology to differentiate instruction and integrate computer science. Technology offers students a variety of formats in which to learn. In a peer- reviewed "Educational Forum" journal article, digital storytelling was published as a way to transform students' perceptions of and their actual abilities to express themselves through the written word (Tackvic, 2012).

Creation of a Makerspace will allow students to author, create and produce books, and expand STEAM programs to ensure student engagement. Creating a print rich environment is critical for struggling readers. The most successful way to improve the reading achievement of low-income children is to increase their access to print (Neuman & Celano, 2012). Makerspaces help individuals identify problems, build models, learn and apply skills, revise ideas, and share new knowledge with others (Sheridan et al, 2014). Makerspace LitLab – Student Authors: Reading and writing are mutually supportive language processes; they are "interdependent processes that are essential to each other and mutually beneficial" (Cunningham & Zilbusky, 2014; Pinnell & Fountas, 2011).

The Makerspace area will provide a dedicated room full of activities and supplies for various creations. Do-It-Yourself (DIY) projects: collages and sculptures, jewelry from junk, comics and graphic novels, coloring and doodling, and bots and circuits will be available. "Animation Studio" and "Code and Go Robot Mouse Activity Set" are examples of the kits that will be provided. Shelves line the walls with trays full of supplies for writing and art. Many colored markers, pencils, crayons, drawing pads, origami paper, pens, bright neon paper, glue, tape, paint, cardboard, felt, scrapbooking supplies, etc. Our Amazon supply list is available in the supporting documents file with this grant application. The room will have work tables, a digital resource station with IPads available with the most innovative apps available stressing reading, writing, and important for today's world, coding. A 3D printer as well as 3D pens will be available for creating projects and the entrepreneurs here at Freedom School may find a market for their innovative creations. (*An illustrated floor plan of the Makerspace room is included in the supporting documents file.*)

Supporting Research: In "The 2015 State of America's Libraries Report," 94% of education professionals report that students demonstrate improved learning, performance, and achievement when technology is used in the curriculum. Research by Daisy Yuhas at the University of California shows that when people's curiosity is evoked, not only do they remember information about the topic at hand, they also remember incidental and unrelated information that surrounds the topic (2014). The STEM Makerspace LitLab will fuel students' curiosity.

An after-school program will be implemented titled Readers Helping Readers, where students will participate in an after-school reading program that will include peer reading activities, community member engagement, and writing and reading time. Activities will include makerspace time, guest speakers and instructors, and author visits. The after-school program will run from October through April every day Monday – Friday. It will be open from 3:30 until 4:00 for students. Teachers and helpers stay for cleanup and planning until 4:30 five days a week. The grant pays two teachers each day. The librarian will make a schedule of teachers who can stay after school and help with the reading program. The librarian will collaborate with other consultants in scheduling. A priority will include asking older students to volunteer and sign up for times to come in after school to read with younger students. By advertising in the community newspaper and sending letters home to parents, volunteers add names to our schedule. We will plan Makerspace activities twice a week, and planning a guest speaker/instructor once a semester will be a priority. At the end of the first year, an Open House night will be held to invite the public to view Makerspace projects created for display. The second year we will plan at least two Open House nights.

Professional Development

Oklahoma Public School Resource Center (OPSRC) and Educators Network will be utilized to provide professional development along with others who specialize in Makerspace Activities. With OPSRC membership, our school receives access to all their professional development, both in person and online. Freedom Public School administration ensures that our teachers are trained and ready to help our students succeed

Supporting Research: Districts have the responsibility to develop and adapt the curriculum and instructional materials necessary for teaching the standards and assuring that the learning process is effective (Darling-Hammond, 2010). Integrating makerspace, it is necessary to consider how to effectively merge content, pedagogy and technology in the early literacy classroom using the Technological Pedagogical Content Knowledge framework (Brueck & Lenhart, 2015).

Project Outcomes

Freedom will engage systems for collecting, tracking, analyzing, retrieving, archiving, reporting, and disseminating of program participation, including demographic, non-cognitive/behavioral, and academic outcomes data to support continuous program improvement and gauge progress toward achieving the grant objectives. These systems are designed to monitor ongoing progress and to determine the efficacy of services and the extent to which leadership is operating the project in fidelity with the project design.

The evaluation plan will enable project staff to be responsive to reporting requirements and communicate results and practices. The foundation of the evaluation plan has been derived from the Context, Input, Process, and Product/Impact (CIPP) Evaluation Model. The CIPP evaluation framework will assist in determining program effectiveness, drive improvement efforts, and guide replication of effective strategies. Context and input strategies were used during the planning stages of this project to determine needs, resources, stakeholders, strategies, budget, and research. Process and product strategies will be used for the evaluation of implementation processes and program outcomes. This will include the use of the "CIPP Evaluation Model Checklist" which is a comprehensive framework for guiding evaluations of programs, projects, personnel, products, and systems.

The evaluation plan is further based on the goal of achieving a quality annual assessment ensuring that program goals and objectives are effectively met. Data will be collected monthly, quarterly, and annually. Formative evaluation methods will assess the needs and evaluate program services, allowing for examination of project implementation and improvement in needed areas.

Formative evaluation will be conducted through open-ended discussions to seek solutions to ongoing needs and improve program plans. Summative evaluation methods will examine and report the degree to which objectives are met through analysis and application of the data.

Qualitative and quantitative data that will be collected and evaluated for professional development will include teacher surveys, training evaluations, attendance records, and the incorporation of new concepts into daily lessons. Data collected for each objective includes:

Outcome 1: Increase the percentage of fourth graders participating in the project who demonstrate individual student growth over the past year on state reading assessments by 5% each year of the project. Baseline data will be established May, 2019.

Outcome 2: Increase the percentage of eighth graders participating in the project who demonstrate individual student growth over the past year on state reading assessments by 5% each year of the project. Baseline data will be established May, 2019.

Outcome 3: Increase the number of books checked out by Freedom students by 10% for the duration of the project as measured by Destiny Library Management Software reports. Baseline data will be established May, 2019

Outcome4: Increase the percentage for science scores for 5th and 8th graders by 5% for the duration of this project. Data will be gathered and analyzed from state testing each year with the baseline data being established May, 2019.

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Collecting and reporting data on performance goals and outcomes of this project should be relatively easy. The Destiny library program will track circulation in reports. The Kindles and IPads will be checked out just like books. The different apps can track Audio books read or at best check out. Students will make reading goals in the classroom and teachers check these monthly. Tracking scores and performance in individual reading, math and science skills is a large part of the NWEA/MAPS testing as well as our Voyager program for PK-3 grades. NWEA partners with states to fulfill the promise of the Every Student Succeeds Act (ESSA) by creating innovative assessment solutions that reveal multiple dimensions of student success and promote learning. NWEA provides K-12 computer-adaptive assessment solutions tailored to state needs—from comprehensive systems that synthesize growth and proficiency measures—to early learning solutions that support on-time third grade reading proficiency. With help from professional learning, educators use different types of assessment data to inform instruction and drive students along a learning pathway rooted in state standards. Our middle school and high school science teachers are utilizing a trial on a new digital curriculum, STEMscopes. It helps teachers adopt effective STEM instructional practices, improve student performance, and increase the engagement of parents through high quality, customized, standards-aligned, hands-on digital STEM curricula and resources.

Sustaining the benefits of these projects beyond the funding period will continue well into the future years. The replacement of devices (Kindles and IPads) is minimal, perhaps one repaired or replaced per year. Furniture, cabinets, shelving, and storage containers last well beyond the funding period. The district budget replaces these items as needed. The district budget also needs to restock inventory for Makerspace throughout the years with local money budgeted for the library annually. Incentive pay for after school programs and extra money for guest speakers will also be paid for out of district funds, especially as the benefits of these are assessed.

The IMLS grant for small libraries guarantees the purposeful integration of information technology, and digital resources will develop relevant 21st century skills required for today's student.   Funding will allow for reconfiguration of the school library, and literacy, math, and science skill development required for critical thinking and application of knowledge. Library patronage will extend beyond the traditional school hours to enable additional meaningful and deep learning opportunities for Freedom Public School students.

	Sept '19	Oct. '19	Nov. '19	Dec. '19	Jan. '20	Feb. '20	Mar. '20	Apr. '20	May '20	June '20	July '20
Afterschool Reading Program	Scheduling	Utilizing									
Reading Corner Reconfigure	Creating		Utilizing								
Kindles & IPads	Ordering and Setting Up		Utilizing								
Audiobook Subscriptions	Subscription Ordering		Utilizing								
Reconfig Office Space to Makerspace	Setting Up Space		Utilizing								
Developing Makerspace Resources	Ongoing / Restocking and discovering new items										
Utilizing Makerspace	Using, Discovering, Creating in Makerspace										
Library/Makerspace Openhouse									Openhouse		