U.S. DEPARTMENT OF EDUCATION

GreenRibbonSchools

School Nominee Presentation Form

ELIGIBILITY CERTIFICATIONS

School and District's Certifications

The signatures of the school principal and district superintendent (or equivalents) on the next page certify that each of the statements below concerning the school's eligibility and compliance with the following requirements is true and correct to the best of their knowledge. *In no case is a private school required to make any certification with regard to the public school district in which it is located.*

1. The school has some configuration that includes grades early learning to 12.
2. The school has been evaluated and selected from among schools within the Nominating Authority's jurisdiction, based on high achievement in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental and sustainability education.
3. Neither the nominated public school nor its public school district is refusing the U.S. Department of Education Office of Civil Rights (OCR) access to information necessary to investigate a civil rights complaint or to conduct a district wide compliance review. The Department of Defense Education Activity (DoDEA) is not subject to the jurisdiction of OCR. The nominated DoDEA schools, however, are subject to and in compliance with statutory and regulatory requirements to comply with Federal civil rights laws.
4. OCR has not issued a violation letter of findings to the public school district concluding that the nominated public school or the public school district as a whole has violated one or more of the civil rights statutes. A violation letter of findings will not be considered outstanding if OCR has accepted a corrective action plan to remedy the violation.
5. The U.S. Department of Justice does not have a pending suit alleging that the public school or the public school district as a whole has violated one or more of the civil rights statutes or the Constitution's equal protection clause.
6. There are no findings of violations of the Individuals with Disabilities Education Act in a U.S. Department of Education monitoring report that apply to the public school or public school district in question; or if there are such findings, the state or public school district has corrected, or agreed to correct, the findings.
7. The school meets all applicable federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

U.S. Department of Education Green Ribbon Schools

Name of Principal: Mr. Vincent Ardizzone
(Specify: Ms., Miss, Mrs., Dr., Mr., etc.) (As it should appear in the official records)

Official School Name: Shadow Valley Elementary School
(As it should appear on an award)

**Private Schools: If the information requested is not applicable, write N/A in the space*

I have reviewed the information in this application and certify that to the best of my knowledge all information is accurate.

Vincent P. Ardizzone _____ Date: 1/28/2021
((Principal's Signature)

Name of Superintendent: Dr. Rich Nye
(Specify: Ms., Miss, Mrs., Dr., Mr., etc.) (As it should appear in official records)

U.S. DEPARTMENT OF EDUCATION

GreenRibbonSchools

District Name: Ogden City School District

I have reviewed the information in this application and certify that to the best of my knowledge all information is accurate.

_____ Date: 1.29.21

(Superintendent's Signature)

Nominating Authority's Certifications

The signature by the Nominating Authority on this page certifies that each of the statements below concerning the school's eligibility and compliance with the following requirements is true and correct to the best of the Authority's knowledge.

1. The school has some configuration that includes grades Pre-K-12.
2. The school is one of those overseen by the Nominating Authority which is highest achieving in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental and sustainability education.
3. The school meets all applicable federal civil rights and federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

Name of Nominating Agency: Utah State Board of Education

Name of Nominating Authority: Dr. Patty Norman

(Specify: Ms., Miss, Mrs., Dr., Mr., Other)

I have reviewed the information in this application and certify to the best of my knowledge that the school meets the provisions above.

Patty Norman

_____ Date:1/28/2021

(Nominating Authority's Signature)

SUBMISSION

The nomination package, including the signed certifications, narrative summary, documentation of evaluation in the three Pillars, and photos should be submitted online according to the instructions in the Nominee Submission Procedure.

OMB Control Number: 1860-0509

Expiration Date: December 31, 2023

Public Burden Statement

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless such collection displays a valid OMB control number. The valid OMB control number for this information collection is 1860-0509. Public reporting burden for this collection of information is estimated to average 37 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The obligation to respond to this collection is required to obtain or retain benefit P.L. 107-110, Sec. 501, Innovative Programs and Parental Choice Provisions. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the U.S. Department of Education, 400 Maryland Ave., SW, Washington, DC 20202-4536 or email ICDocketMgr@ed.gov and reference the OMB Control Number 1860-0509. Note: Please do not return the completed ED-Green Ribbon Schools application to this address.

Documentation of Sustainability Achievement

Narrative for Pillar I: Efforts to Reduce Environmental Impact and Costs

Our Efforts to Reduce Environmental Impact and Costs

Our school was constructed to exceed energy code requirements and is built to LEEd standards. The grounds of our school are city owned and used as a public city park and built in three sloped tiers for the purpose of water conservation. Finally our disposal for solid and hazardous wastes are in keeping with our city standards.

Some of the ways our school strives to reduce its environmental impact are:

- Reducing greenhouse gas emissions by educating our community during our idle free week initiative, bike and walk to school initiative and educating students about bike safety, and parking stalls for energy efficient cars.
- Decreasing waste productions as we have the students become waste managers and waste engineers, and manage our onsite compost and recycling centers.
- Educating our students on water efficiency and conservation as we create a water wise outdoor classroom that will further our environmental science curriculum while providing a habitat to protect native Utah animals and plants.
- Working to increase the use of solar panels and rain collection for the energy and water usage of our school facilities.
- Participating in the Utah Department of Energy Green Car program.

In the following sections we will be discussing these and more programs in further detail.

Reducing Greenhouse Gas Emissions:

Each year during our Idle Free Week initiative our school has been an example for other schools and acknowledged by TV and newspaper reporters. For a full week in February or March we educate students and parents about the importance of reducing emissions especially in months where air quality declines. This year we will begin with a virtual assembly, then put up signs outside in our drop off and pick up zones to remind parents to be idle free. If parents turn off their engines their student will be given a small prize as they enter the school. In previous years our Green Ambassadors conducted a small research project to see if the idle free initiative made any difference in idling cars waiting to pick up children at our school. They found that more than half of the cars were not idling before the initiative and more than 75% of the cars were not idling two weeks after the initiative.

Our energy and water-efficient facilities and practices:

Our school's original construction plans launched our community's vision of an environmental science magnet school that maintains a green school status. Shadow Valley was built in 2009 to LEEd standards. The design and layout of the school helps it to exceed energy code requirements by over 14%. This was accomplished by minimizing west facing windows, reducing internal electrical loads, lighting improvements including energy efficient lighting, harvesting sun and wind energy, and using highly efficient heating and cooling systems. Our school is also designed to maximize water efficiency and use 45% less water than a building constructed to normal standards. Our school was also built with 28% recycled materials such as structural metal, metal studs, concrete, acoustic ceiling tile, carpet, and ceramic tile. Over 44% of the materials used to build our school were manufactured within 500 miles of our location which lowered transportation costs and environmental impact.

The lighting in each room is also motion sensored so that if the lights are forgotten they will shut off automatically after ten minutes of no movement. We also have summer light policies to remind students and teachers to use natural daylight as much as possible instead of

light switches by opening the windows. Over any extended holiday breaks such as winter, fall, spring, or summer breaks teachers have to complete an energy and water saving checklist. Requirements include: unplugging personal refrigerators, microwaves, computers, printers, projectors, and sound systems. They are also required to double check faucets making sure they are and turned off tightly. Our heating and cooling systems are also shut down over extended breaks to save on energy costs. Also as was mentioned earlier we have an on site wind and solar panels to be more efficient. Please note that we started the year off with a working windmill but a recent windstorm tore off the turbine and we are looking into funding for getting it repaired or replaced.

Our school grounds are designed to be water efficient as they were landscaped as three sloped tiers. The water run off is designed to run down and water each tier and then collect in a retention pond that doubles as our outdoor classroom area on the bottom most tier. This reduces the need of sprinkler system use which is extremely beneficial in our desert climate.

We have started to implement plans to build a solar powered greenhouse addition onto our school. The greenhouse temperatures and lighting is designed to be run solely by solar panels that will be fixed to the roof. The plants that will be housed in the greenhouse will be watered by rainwater collected in rain collection barrels that will also be part of the greenhouse structure.

Our entire district is dedicated to building green and energy efficient buildings, keeping track of energy usage data the media and capital project board are updated monthly on our energy conservation programs.

Improving Water Quality, efficiency, and conservation:

As was stated in our opening paragraph our school is also designed to maximize water efficiency and use 45% less water than a building constructed to normal standards. The grounds were created so little water is needed for watering during the warmer months. We are working with Ogden City, Weber State University, and Weber Basin Conservancy District to redesign an outdoor classroom that was created but not maintained in the original plans of the school and make it usable for our school and community again. Because our school sits on a public city park we have been communicating our plans for the space with Ogden City. Weber State University created a grid map of the area for us that students can use to draw their designs on. Weber Basin Conservancy District has educated our fourth through sixth grade classes about the importance of reducing water usage especially in our arid environment, and students learned some strategies for designing a local-scape and were given the tools to pick out water wise and native plants. Since the outdoor classroom will not have a sprinkler system students are looking at ways to collect and irrigate the water such as recreating the retention pond, or creating purposefully placed streams or even creating and maintaining water barrels. Students also have looked into ways of keeping the area pleasant and free of mosquitos by encouraging bats and other natural predators to make their homes in that space.

Last year we had the students complete their water wise designs, pick a winning design, finish a sustainable student centered maintenance plan, and then gain city approval for the changes. The entire project is going to be led by the students under the guidance of teachers and community partners. Each section of our outdoor classroom will be planted and built in phases. The first phase that we are almost ready to complete is our ecosystems area. Ogden CIty has dug out a retention pond and stream system so that the rain and snow runoff collected there will provide the water needed for native Utah animals and plants to thrive without the use of extra sprinkler system usage.

Finally one of our sixth grade students will be taking preliminary water samples this year. They will be revamping our composting program and using our compost to improve the health of our ecosystems area. Some of the research our students have collected has shown that adding

compost to soil not only helps the soil but also improves the water quality of an area. As we add the compost into our soil we will be able to determine if that research is correct.

Reducing Waste Production:

Our Kindergarten and Special Education curriculum began with a unit on waste management and recycling. They actually became waste managers and learned to demonstrate how much trash is thrown away per person and household daily, weekly, and over the course of a year. They also discovered how many landfills there are in the United States. Next they discovered how trash affects the environment and about the plastics in our oceans and the recycling crisis in the U.S. at the current time. They analyzed graphs about gas emissions caused by trash. Students talked about how we can reduce waste, and authored books and to educate the community about the importance and processes of recycling. Our kindergarten classes have been making and putting signs on their recycling bins to remind others to recycle and have designated specific bins to sort each type of material they are recycling. They also have been collecting old dry erase and magic markers to turn into crayola for recycling. Finally we have been putting up artwork in our hallways to show how recycling can make a positive impact on our oceans and how it is important to keep them plastic free.

One of our sixth grade classes is revamping our composting and recycling programs. They are becoming soil scientists and need to figure out ways to use recycled materials such as paper to reduce the odor and increase the breakdown of the materials they collect for compost.

Use of alternative transportation.

This year our school is partnering with senior Weber State Engineering Students to design and build an electric green car to race in the Mountain West Grand Prix. This is a yearly race that attracts fourth through twelfth grade, and university students from all over Utah. While this project is part of our Utah Department of Energy program to educate Utah students and the community about alternative transportation solutions, it is part of a global initiative based out of the U.K. called the Greenpower Education Trust. We are proud that even the transportation we plan to use to get to Weber State to build our car and to get to the race will strive to reduce gas emissions by using the Weber State bus shuttle, and carpooling.

About 51.06% of our students ride the bus to school, and roughly 22% predominantly walk, bike, or carpool with other families.

Our school also strives to encourage alternative transportation by dedicating specific parking spaces to low emission vehicles, partnering with bike Utah to educate and encourage students to ride their bikes to school and other destinations, and holding walk/bike to school day events each year.

Narrative for Pillar 2: Efforts to Improve the Health and Wellness of Students and Staff

School and District improves health/Wellness of students and Staff with environmental health program

Our district is a title one district dedicated to staying open as many days as possible to ensure that students have a safe place to learn, have food provided for them, and have their best chance at learning life skills that will increase their quality of life as adults. Health, wellness, safety, and graduation for every student is at the forefront of our education. Our mission statement is " Maximizing educational opportunities for all students, in a safe, nurturing environment." Our district also cares about its teachers by implementing the Wellness 365 program. The motto of this program is "A happy employee is a healthy employee." In the following section will be able to explain further how we are dedicated to improving the health and wellness of our staff and students.

Contaminant, moisture, asthma control, air quality

_____Just like the rest of the world the air contaminant our school is combating the most is the COVID19 virus. Our school goes to great lengths to slow the spread of this disease each day by taking the temperature, asking about any symptoms, sanitizing hands, and checking the mask of every student who enters the building. Our teachers keep track of absences, and quarantine data to keep our students safe. We use safe social distancing and proper mask wearing procedures at all times.

Air quality is measured throughout the day. Our student group called News Crew addresses the school over the morning announcements and among those announcements gives the current air quality for the area. Our school is a part of the US EPA's Air Quality Flag Program. This program was kicked off during our Idle Free week, and the students are educated on how the flag systems works. On yellow and red days students that have asthma or are sensitive to bad air quality will stay inside and are provided alternate activities. Our district also regulates and maintains excellent air quality in our buildings.

While one of our sixth grade classrooms is working on improving our composting and recycling programs another classroom will be becoming air quality controllers and conducting research on how to improve air quality within the school. They will be using an air quality measuring device to test the air and then research and test ways to improve that air. They will be experimentmenting which different plants, or procedures will keep the air cleaner. Their findings will be recorded so that we can add to those ideas and practices in the future.

Pest Management:

To reduce pests on the property we have discouraged students taking or consuming any food outside. In years past, students with home lunch put their packed lunches into a basket that was taken outside with the class so that it could be picked up by the teacher and brought in after lunch recess was over. We found that that practice encouraged some pests to venture closure to the school attracted by those leftover lunches. Now our school simply keeps those baskets in the lunch room until an assigned student from each class can come and collect them.

Another way we are improving pest management is by educating out students about which animals are a friend or foe in our environment. As ecologists our students are researching which animals are beneficial to a local garden and which are pests. With the habitats that they are designing they will be picking animals and plants that naturally control and minimize pests so that our outdoor classroom and the rest of our school can be enjoyed without using harmful pesticides.

Water Quality and Procurement

The use of drinking fountains has been prohibited because it could possibly increase exposure to the CoronaVirus. This led to unique concerns for our environmentally conscious school, with the use and disposal of too many plastic products. Our solution was to install touchless water bottle filling stations over one of our drinking fountains and in our faculty lounge and office. These stations filter the water, increasing the quality of water our students and faculty drink, protects them from surfaces that accumulated germs, procures healthy hydration practices, all while saving plastics from being put in the dump. We have saved 2,860 bottles on one of those stations alone.

Nutrition and outdoor physical activity

We utilize the programs Let's Move and Alliance for a Healthier Generation to assess our physical activity programs and school lunch programs. We use assessments from these programs to set goals and action steps to improve nutrition and physical activity.

Our Physical Education teacher partners with Weber State University's Physical Education program to stay up to date on best practices and help train future P.E. teachers. Because of the P.E. teacher's involvement our students and staff are learning and participating in new and research based best practices in P.E. Each classroom gets about a half hour of PE instruction per week, usually outside. Our students are learning safe ways to participate in physical and team building activities, which they apply during school hours at least twice a day for fifteen minutes in outdoor recess. Some of our students favorite team recess play is four square, basketball, and flag football.

In the spring months our students will be out doors digging and planting our habitat and ecosystems area. Teachers also take students outside during our end of level testing months to exercise their bodies between the long periods of sitting and testing. During this time with these two activities students will increase their time outside by one to two hours per day. As the students prepare for and complete end of level testing we also educate the students and provide nutritious brain food for the students. They learn that a balanced diet and physical activity improve their ability to think and recall information

While our other two sixth grade classes are revamping our composting/recycling programs, and indoor air quality, our final sixth grade class will be working towards designing our second outdoor classroom which will be a mindfulness and solar greenhouse. We are writing a grant to get funding for the project but our students will be ultimately designing and using the space. This Greenhouse will be designed to be self sustaining to reduce our environmental footprint. It will have solar panels to sustainably power lighting, heating, ambiance fountains, and air circulation. It will have rain collection barrels so we can harvest the water to sustain our greenhouse plants. It will be used as a haven for students and teachers to learn mindfulness practices such as yoga and creative movement. It will also help our Special Education students, who normally don't go outside because of safety concerns, to experience the outdoors in an enclosed environment where they have less chance to separate from their supervisors. Finally, this structure will aid our students as they learn to grow plants to improve air quality and have the opportunity to grow more nutritious food. Our hope is that our community will benefit from those plants by taking home harvest seed and plant starts that they can then grow and nurture in their own homes with the knowledge they learn from the students in our school.

Health Education, Services. Counseling,

Our district promotes the health and wellness of students by organizing action plans for each health situation that could arise by following guidelines from the Weber Morgan Health Department. They also support child nutrition by serving high quality nutritious food that meets or exceeds state and federally mandated guidelines, by being a nutrition education resource.

Three times a year students and faculty take a panorama survey to assess social, emotional, and learning needs in the school. Teachers make sure that they are encouraging positive group and peer interactions, so that students feel safe and valued at school. We have also adopted the Second Step curriculum. Now more than ever with Political, Medical, and Civic uncertainty we feel that it is vital that every student is taught social emotional lessons and strategies daily that they can implement and practice in their interactions with each other.

To provide an education that addresses the whole child there are added questions about our students social and emotional needs given in a parent centered survey. With the information given we create lessons and other appropriate activities. Our school counselor and behavior interventionist conduct weekly group counseling sessions, and when needed the counselor will work individually with students.

Community members also have the opportunity to respond to a stakeholder survey each year to assess the strengths and weaknesses of the school vision, mission, and the ability to work well with the community and its members.

Using the data from this survey we have improved the ways our part time counsellor and behavior specialist help the students in our school. For the first time ever our counsellor conductions classroom lessons as well as her behavior skills groups and small one on one sessions.

With our newest Mindfulness Solar Greenhouse our PE instructor will be able to provide student and staff meditation education through new yoga and creative movement curriculum in an outdoor setting.

Staff Health Promotion

Our district promotes the health of staff members through the Ogden School District Wellness 365 program by inspiring and creating a workplace that will focus on positive health behaviors and celebrate and improve the quality of life for our valued employees. The primary goal of this program is to increase the overall health and well-being, as well as productivity of all employees through promotion of all aspects of healthy living. The program seeks to increase awareness of positive health behaviors, provide educational opportunities in a variety of health-related issues and support each employee as they make and sustain healthy lifestyle choices. The Wellness 365 Program voluntary requirements are: complete a Health Risk Assessment, complete a biometric screening through either on-site screenings or by visiting a personal physician, complete at least one preventative screening examination (yearly physical, skin cancer screening, dental, vision, mammogram, etc.), and participation in the Trauma Stewardship. This can be done by reading the book on their own or by joining in book club discussions held throughout the year. A reflection activity is provided that must be completed in order to receive credit. Teachers track their positive habits and are given points that add up to go toward an insurance premium deduction. This program has encouraged teachers to establish and work toward a healthier lifestyle.

We also have a school fitness champion who creates monthly staff challenges to participate in each month. Some of our challenges have included watching a presentation on how to decrease stress in our life and then picking a strategy to implement.

Because of COVID our school has drastically increased our sanitation procedures. Our teachers have to take their temperature, answer the basic wellness questions, and don a mask before they enter the building. They each have gone to great lengths to make sure their stations are sanitized and orderly and that all the materials that they and the students used are sanitized after each use. Because of these measures we have been able to stay open so far for the entire 2020-2021 school year, even amid closures of neighboring schools.

Narrative for Pillar 3: Efforts to Ensure Effective Environmental and Sustainability Education

Your Efforts to Ensure Effective Environmental and Sustainability Education

While building Shadow Valley Elementary about eleven years ago, the community and our industry partners supported our vision to make our school Green Certified and an Environmental Science Magnet. Now our community supports our vision of being a platinum STEM designated school to better support and reaffirm our original vision. Our Green and Environmental Science Certification coupled with our STEM designation helps direct our teachers instruction for the improved interest and success of students' futures.

Our school, neighborhood, and community partner created mission is: “Shadow Valley Eagles will persevere to achieve college and career readiness by developing the skills of critical reading and thinking, communication, collaboration, and creativity in order to prepare them for high school graduation, a college education, and career.” Our students strive to be “EPIC” Educated, Problem Solvers, Innovators, and Collaborators. The mission of all our STEM instruction supports our school mission: “To explore career opportunities as we learn Green STEM collaboration and communication skills. To help our school and our community by sharing our knowledge in a way that will use less waste. “ Our community is dedicated to preparing our students for the world beyond the classroom by turning the focus of teaching to these four traits. Teachers and community agree that we need more hands-on instruction and exposure to real-world application where teaching is inspired by authentic college and career preparation strategies. Our industry partners are supportive and eager to help students gain the skills necessary to become innovative and valued employees in their field.

Last year we applied for the National Recognition of our Green School and are applying again this year. Our hope is to attain recognition by the end of five years. That National recognition will hopefully enable us to increase the hours of our Environmental Science Specialist to full time and make a small change in title to Environmental STEM Specialist which will better increase the scope of our curriculum and allow us to also keep our Utah Platinum status as a STEM school on top of our status as an Environmental Science School.

<u>Environmental/Sustainability education:</u>

Being an Environmental Science magnet means that our teachers have a focus on science curriculum. Our teachers teach science weekly using the 5e's (phenomena based lesson planning), inquiry/problem solving, and AVID strategies. Our kindergarten classes really embody this with their science lessons. One of the students favorite lessons was the phenomenon of motion and a pumpkin investigation. Our entire school is encouraged to conduct a Science Fair Project each first half of the year, for sixth graders it is a classroom requirement. They investigate a question or problem that they are interested in and conduct an experiment or engineering solution to the question or problem, this year with the science fair the students were instructed in the three pillars and requirements our school follows to maintain our status as a Green School and then generated ideas for their projects based on those pillars. Many students who are concerned about the health and wellness of our global community decided to conduct experiments about germs and how to best protect ourselves and others from illness. Others picked experiments about maintaining healthy bodies by investigating what exercises best reduce resting heart rate.

After the Kindergarten and Special Education classes were responsible waste managers they became biologists. They will be growing a plant from a seed and hatching chickens and trout eggs. They will be comparing and contrasting how each living thing grows and how it is specifically adapted to its surrounding. Finally they will learn how to give it the right home, that will ensure that it will continue to thrive. Our first through fifth graders are learning what it is to

be an ecologist by learning about native Utah creatures and plants and what they need to survive. After they research what native animals are pests and what are beneficial to our environment they will be able to pick a beneficial animal from their AVID notes and research. They will then draw and code a habitat that they design for a small native creature. Feedback will be given on their designs from teachers and community partners before they plant and build those habitats in our outdoor classroom ecosystem section. This project will last for years to come as our students observe the animals and plants in the area and continually improve the space for those creatures and for future student study.

Interdisciplinary learning between environmental, energy, and human systems:

Each year our kindergarten team participates in the adopt a tree program. Our students "adopt" a tree, deepening their awareness of individual trees over time and encouraging a greater understanding and appreciation of their local environment.

Our fourth grade students learn about the science of energy and the importance of alternative energy. They study in depth about how windmills work and study their positive impacts on the environment. Sadly the windmill on our school grounds was broken in our last high wind storm. They have been investigating ways of how to fix and or build a new windmill for our school.

Environment and sustainability with STEM content knowledge and thinking skills in all subjects:

Shadow Valley integrates environmental science and STEM content knowledge into every subject and we will often create projects where they use interdisciplinary skills to solve environmental problems. In science we integrate writing where every grade is encouraged to complete a CER (Claim, Evidence, Reasoning) at the end of each 5e lesson plan to show what students learned about the phenomena they investigated. This shows a high level of Depth of Knowledge as students explain the phenomena, give evidence for their claim, and explain how the evidence supports their hypothesis and learning.

For the first time ever our school has one to one technology and our students are learning with online platforms like Canvas and Google Classroom. This has shifted most teachers to teaching 50% paperless. Our students are getting more and more technologically advanced to keep up with our 21st century world.

In fourth grade our students applied STEM knowledge and thinking skills to build a working windmill prototype using snap circuits, that also helps them explore how much energy is saved by a windmill.

Our kindergarten younger grades became waste managers and applied their emerging counting and math skills to calculate and analyze how much trash there is in the United States and how to decrease trash in our landfills. They also practiced math and science skills such as sorting things into groups and learning how materials break down over time.

The school wide science fair encourages students to think like a scientist or engineer and conduct experiments or create things that will help them further study the concepts outlined in the three Green school pillars.

Finally our students have been working in language arts to write a paper about how they "How have you helped the school and community implement Green School Policies and Programs?" This paper will jump start our participation in the President's Environmental Youth Award. For the first time ever we will be encouraging students and nominating them for this prestigious award.

Civic knowledge paired to environmental and sustainability education:

Our school creates curriculum to keep the students updated on things that are happening currently about environment and sustainability practices.

To provide an alternative to field trips which have been suspended due to COVID, we invite speakers to virtually present in our classes to update our students on current issues. We have had a speaker come and share about current Utah Weather patterns to our fourth graders. Each month our third graders read “Time for Kids” to learn about new events happening around the world.

Our fifth and sixth grade students also are dedicated to learning civics as they watch the daily broadcast of CNN10. Once they are through watching each program they reflect and discuss the implications of what is going on in the world around them and how it affects them and their environment.

Environmental literacy standards assessments:

Our Science Curriculum is graded through rubrics that assess science journals, and CERs. Our Art, Environmental Science, STEM Writing Enrichment Specialist, and PE specialists and all classroom teachers create rubrics for projects for the students that are performance based, articulate the goals of the assessment, and how the students are assessed, they also differentiate according to the needs of the students as discussed with the classroom teacher. Our state science standards have been redone and this is the first year we are implementing them. The new SEEd standards have a focus on environmental science including climate change, habitat, ecosystems, recycling, engineering, and alternative energy solutions. Grades 3-6th also are tested on their new SEEd standard science knowledge each in the SAGE end of level tests.

Environmental literacy professional development:

Teachers participate in faculty meetings twice monthly. Our leadership team meets weekly to plan the following week's faculty meeting and professional development on AVID, literacy, and STEM strategies, and SEEd standards. These topics improve and align with our school goals of increased literacy, becoming an AVID and STEM school, and maintaining our Green School designation.

During our previous year’s COVID shut down we were able to devote many hours to improving our staff environmental science professional development. The theme of this year’s professional development was “Getting back to Going Green.” Each teacher completed a weekly online class that led them through the following topics:

- What are the three Green school pillars?
- The five year curriculum plan set by the environmental science specialist,
- The city, community, and school five year plan for the redesign and building of our outdoor classroom
- How to create an integrated STEM/environmental science lesson plan with our new SEEd standards?
- How to plan a problem based learning unit with our environmental science specialist to be taught in the classroom as a supplement to the Environmental Science class’s weekly curriculum.

We have had time dedicated to faculty meetings and PLCs to science education with an emphasis in environmental studies.

Field trips, clubs, and service learning:

COVID has shut down all field trips and clubs except for our Green Car after school program (because we needed to preserve the project that was started last year with our Weber State senior Engineering students so as not to postpone their graduation.) Our nine students are learning how to use Computer Aided Design software, how to use, design and engineering processes, and how alternative means of transportation can improve our economy, air quality, and traffic.

Each student learns how to serve our world community by being taught how to reduce, reuse, and the correct way to recycle. Each classroom has a paper recycling bin and then other recyclables including technology, used markers, batteries, and metals. Our recycling center collection is then periodically transferred to the proper recycling facilities. The community is also encouraged to bring the items to recycle that are not collected by the city. Students learn that reducing, reusing, and recycling is important because it reduces the amount of waste in landfills and oceans.

Summary Narrative: An Overview of Your Work Encompassing All Three Pillars

Shadow Valley Elementary is nestled on the east bench on the Wasatch Front. The building was constructed in 2009 with the local community's vision of an Environmental Science magnet school that teaches students how to live sustainable lives, along with a strong science curriculum. The campus was built to LEEd standards. The design and layout of the school helps it to exceed energy code requirements by over 14%. This was accomplished by minimizing west facing windows, reducing internal electrical loads, energy efficient lighting, harvesting sun and wind energy, and using highly efficient heating and cooling systems. Our school is designed to maximize water efficiency and use 45% less water than schools constructed to normal standards. More than 28% of the school was constructed of recycled materials such as structural metal, metal studs, concrete, acoustic ceiling tile, carpet, and ceramic tile. Over 44% of the materials used to build our school were manufactured within 500 miles of our location which lowered transportation costs and environmental impact.

This year marks the eleventh year of operation for the school. The school has maintained its environmental focus through administration, faculty and staff changes. This has been accomplished through creating a curriculum that is based in environmental studies. Every subject studies some aspect of the environment and projects have been created to integrate all the subjects into solving an environmental issue.

Currently students have been studying about the recycling crisis, they became aware of the crisis last year when the local recycling program was suspended. Students asked questions about the reason behind the suspension. It was through their interest that they learned that the recycling crisis was on a national/ global level. They have since created projects to bring awareness to the issues and show the community ways to repurpose or reuse materials before recycling or disposing of them.

Our students enjoy and engage in Project Based Learning (PBL) activities. Our beautiful campus is located in a city park. The park layout was created by the city with the same design planners as the school. The park was designed to slope into three tiers so the water would run down each tier and less irrigation would be needed to maintain the lawn. The trees and plants on the school campus and park are native to the area and are water wise requiring minimal watering. The park has an outdoor classroom that was not clearly defined by the school or city. After the first year the school and park opened, the outdoor classroom was not maintained and invasive plants grew and the space became unusable. The STEM and Environmental Science teachers have created a school wide five plus year problem based learning project to better our school campus. We have received grants to help assist in the design and renovation of the outdoor classroom. The teachers have also established relationships with community partners like the Ogden City, Weber Basin Water Conservancy District, and Weber State University in this project. Our students have redesigned the outdoor classroom into four distinct areas. The area we are rebuilding this year is marked out as our ecosystems area. The students are creating habitats to provide for the needs of beneficial Utah native creatures while naturally keeping pests away so that the entire community can protect and learn from these creatures in the future.

The above project is one of our larger projects. We do have smaller initiatives that we conduct every year to help serve the community by raising environmental awareness:

- Idle Free week
- Project learning tree
- President's Environmental Youth Award
- Bike/Walk to school day
- Green Car after school program

Once COVID restrictions are lifted we will reinstate and expand our Green Ambassador program, Science club, lego league, girls who code, and STEM night.

Every student at Shadow Valley Elementary attends Environmental Science classes. Our environmental science program focuses on educating students about the environment as well as providing large and small PBL activities that explore and attempt to solve environmental issues. This year the upper elementary students created science fair projects that focused on a topic that falls under the three green school pillars. Or sixth grade students are leading the school in our design of acceptable composting procedures, indoor air quality initiatives, and alternative energy powered structure design. The first through fifth graders are creating a sustainable ecosystems and habitat area that will teach them State organisms, ecosystem, and habitat based SEEd curriculum standards. Kindergarten and Special Education students are learning about the importance of recycling and teaching others how to recycle. They are also becoming biologists to compare and contrast the growth and needs of different living organisms.

The health and wellness of our students is paramount in our school's curriculum. Our teachers supported by our School counsellor and behavior specialist have adopted the Second Steps curriculum to support students' social and emotional learning. It focuses on teaching mindfulness, compassion, empathy, and resiliency practices. We also support our students' mental needs with Comprehensive Counseling and Guidance, a statewide program which is designed to provide support for all students as they navigate their way through their education and prepare to become College and Career Ready by the time they graduate from high school.

Our PE instruction is amazing through focusing on teaching students sustainable ways to stay active. Our PE teacher is also working on easy to teach yoga and meditation classes, designed for students and teachers who need healthy ways to cope with stress. Our PE instructor, recess monitors, teachers, and lunch staff, partner and support our district wellness policy that supports the idea that "The winning recipe for a healthy lifestyle includes a combination of both good nutrition and physical activity." They teach the students that their bodies need a variety of nutrient rich foods to grow and prevent illness and needs to move and exercise every day.

Because our school is public it is part of a larger district, therefore our breakfasts and lunches are designed by the district nutritional personnel. Our district strives to provide healthy meals and nutrition education to students, teachers, and parents by creating games to test the skill of the students, and to help them remember that "Choosing the right foods can help you learn better, play harder, and have a lot more energy." There are also resources available to teachers to reinforce our district's Wellness Policy and help teachers incorporate nutrition lessons into their curriculum. Finally there are tools and resources provided for parents to help them encourage fitness and nutrition at home. They "help… encourage and reinforce lifelong nutrition and fitness practice that will support healthy lifestyles."

Our district also supports our staff wellness initiatives. We have a staff wellness representative who leads our teachers in monthly wellness challenges. This year we had challenges to improve our mental health and de-stress. We have step challenges, and nutrition challenges. Teachers participated in these challenges and learned new practices designed to improve their ability to pick which health strategies work best for them.

To provide the best education for our students the health and wellness of our faculty and staff is vital. The school supports the health and wellness of our faculty and staff by building a strong school climate where everyone feels supported by administration, staff, and teachers. We have yoga and walking groups after school for any staff member that needs to unwind. The district also promotes a wellness challenge every year where all employees are encouraged to make small daily habit changes to increase health and wellness.

Leading the instruction are our exceptional teachers who are meticulously integrating the State Standards, particularly the new SEEd standards, into the content of their instruction. They are striving to increase student voice (especially focusing on green communication strategies),

interest, and pedagogy with the resources we have. Each teacher works to implement new teaching strategies that are meaningful to every child and that will best prepare our scholars for their future college and career pursuits. Shadow Valley has a focus on science curriculum. Our teachers teach science weekly using the 5e's (phenomena based lesson planning) and inquiry/problem solving strategies.