



## School Nominee Presentation Form

### ELIGIBILITY CERTIFICATIONS

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#### 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.
8. The school or its district has in place and is willing to provide a link to or a copy of a non-discrimination policy, upon request. The U.S. Department of Education reserves the right to disqualify a nomination and/or rescind an award if unlawful discrimination is later discovered.

### U.S. Department of Education Green Ribbon Schools

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Name of Principal: Mrs. Stephanie Strader

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

Official School Name: Pioneer 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.

Stephanie Strader Digitally signed by Stephanie Strader  
Date: 2023.02.07 15:11:26 -08'00'

Date: January 26, 2023

(Principal's Signature)

Name of Superintendent: Mrs. Krestin Bahr

(Specify: Ms., Miss, Mrs., Dr., Mr., etc.) (As it should appear in official records)



District Name: Peninsula School District

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

Date: 01/27/23

(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: Office of Superintendent of Public Instruction

Name of Nominating Authority: Ms. Elizabeth Schmitz

(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.

**Elizabeth Schmitz**

Digitally signed by Elizabeth Schmitz  
Date: 2023.02.07 11:12:30 -08'00'

Date: 2/7/2023

(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](mailto: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.

## Summary Narrative

### Summarize the school's efforts in all three pillars.

At Pioneer Elementary, we pride ourselves on fostering thinkers of the future. From design to build, sustainability and efficiency have been a focus of the facility, our operations, and our learning model. Our STEAM project-based learning model focuses on Equity, Learner Agency, Collaboration, Authentic Learning, and Expanding View of Success. These ideas provide a foundation to think differently about teaching and learning. We engage experts, take learning outdoors, and foster service projects as students pursue personal interests. In collaboration with partners, our staff plan content-integrated units that promote critical thinking about environmental problems we face locally and globally and engage in meaningful solutions. The young minds of our community reflect on their impact and how they have the power to influence change. Every community member, including students, staff, and family, is committed to this focus as we grow learners, leaders, and thinkers who will positively impact this world.

## School Profile

**School Name:** Pioneer Elementary

**Address:** 8502 Skansie Ave. Gig Harbor, WA 98332

**Website:** <https://pie.psd401.net>

**Principal:** Stephanie Strader

**Email:** [straders@psd401.net](mailto:straders@psd401.net)

**Phone:** 253-530-3501

**Total Student Enrollment (Fall 2022):** 512

**Select a metric that best represents your school's disadvantaged population, using data from Fall of 2022:** Free and Reduced Lunch Rates

**If you selected Free and Reduced Lunch Rates, please list the percentage of your student body that qualifies:** 11.4%

**Is your school**

Public

Private (independent)

Name of School District: Peninsula School District

What grade levels does your school serve? K-5

School or District Facebook Page: [Pioneer Elementary School | Facebook](#)

School or District Twitter Handle: [https://twitter.com/Pioneer\\_STEAM](https://twitter.com/Pioneer_STEAM)

#### Application Team Information

<b>Lead Applicant</b> John Hellwich	
<b>Lead Applicant Title</b> Asst Superintendent	<b>Lead Applicant Email</b> hellwichj@psd401.net
<b>Lead Applicant Phone Number</b> 253-358-6786	<b>Alternate Phone Number</b> 253-348-0093

#### Application Team Members

First & Last Name	Title/Department (Can include parent, student)	Email
Stephanie Strader	Principal	straders@psd401.net
Melissa Wisner	Exec Director, Dept Learning and Innovation	wisnerm@psd401.net
Patrick Gillespie	Director, Capital Projects/Maintenance/Grounds	gillespiep@psd401.net
Jennifer Wisner	Instructional Coach, Pioneer Elementary	wisnerj@psd401.net

## Cross Cutting Questions

### Awards and Programs

Does your school participate in a local, state, or national green school program? If yes, which program(s) are you participating in, what level(s) are in progress, and what level(s) have you achieved?

Program	Level in Progress	Level and Date Achieved
Camp Seymour Outdoor Education Program	3 times per year	September, December, and April

In the past five years, have your school, staff, students, or student groups received any awards relevant to the ED Green Ribbon School recognition?

If yes, provide award details below.

Award	Awarded To	Awarded by	Year Received
OSPI STEM Lighthouse Grant	Pioneer Elementary	OSPI	2020-2021
Rotary Grant	Pioneer Elementary	Rotary Club of Gig Harbor	2020-2021
STEM Grant	Pioneer Elementary	Strategic Weapons Facility Pacific at Bangor, WA	2021-2022
ClimeTime School Program Grant	Pioneer Elementary	OSPI	2022-2023
Green Ribbon School	Green Ribbon Leader-Pillar 3	OSPI	2021-2022
WEA Wellness Grant	Peninsula School District	Washington Education Association	2021-2022

## Communication Strategies

How do you communicate your Pillar I, II, and III required policies and best practice recommendations to students, school principals, faculty, staff, parents, and other members of your school community?

Pioneer Elementary strongly believes in two-way communication and uses a variety of methods to engage our school community, including students, staff, and families. Communication with students is an element of focus at Pioneer as it is an essential component of our evaluation system (Danielson) and our Universal Design for Learning (UDL) focus. Staff are intentional about communicating learning objectives and scaffolding supports so all students have access to meeting those objectives. In addition, students and staff make connections to past, current, and future learning.

One of our Core Principles is to expand our view of success. All students at Pioneer have a portfolio where they track their progress toward standard and collect work samples that reflect their learning. Students use these portfolios to take an active role in reflecting on their learning and setting goals for future growth. Furthermore, classroom teachers use these tools to communicate learning from home to school. At least once a month, students bring home their portfolios to share their learning with their families. This includes reflection on growth and shared goals for future growth. This practice has exponentially increased our home-to-school partnership and communication around school goals. These portfolios not only include foundational data but reflections on engineering practices and design models to answer their big Project Based Learning questions.

Pioneer also shares our work related to the pillars of Green Ribbon schools through weekly electronic newsletters and social media. These tools provide families with information about our goals as a learning community and highlight examples of student experiences. We share information about our routines and systems, like no idling during drop-off and pick-up time. We seek input from our community to guide our systems. This ensures we respond to community needs and communicate vital information to strengthen our partnership.

## Equity

Describe how all students at your school, and more broadly how community members, are being included in, honored for, and engaged in this work? What are you doing to prioritize access to high quality environmental and sustainability education experiences for students historically underserved by science education, including but not limited to students with free or reduced-price lunch, emergent multilingual students, migrant students, and students with disabilities?

Equity is a key piece of our district's Strategic Plan. It is further emphasized at Pioneer as one of our Core Principles. Our strategic plan specifically states, **"We will ensure an inclusive community and culture where everyone feels safe, valued, respected, capable, and has a sense of belonging."**

Pioneer Elementary is a multiage STEAM (Science, Technology, Engineering, Art, and Mathematics) Project-Based Learning school. All students within the Peninsula School District are eligible to apply and are selected through a lottery process. One of our five core principles is equity. This principle is grounded in our belief that all children are capable of learning at high levels. We believe our job is to remove barriers that would otherwise limit learning. To do this, teachers design lessons and units for students "outside the box." When we do, those in the middle also benefit from the access points and resources. For example, teachers provide a collection of resources, including videos, texts, infographics, and podcasts, to help students develop content knowledge. These resources are available for all students, and each one chooses how they want to learn about the topic. In a recent 4th/5th grade lesson on conductivity, students were challenged to explore materials for conductivity. Turns out, tacos can conduct electricity. Who knew?

Furthermore, as we think about equitable learning experiences, we believe that students are more than just test scores. We consider the whole child approaches to looking at the gifts, strengths, and goals of each student. One measure we use is the WASA Inclusionary Practices. In our fall 2021 assessment, 100% of students reported they received helpful feedback they needed to achieve their goals. Analyzing the data for these 14 practices, we average about 11 percentage points higher than the district average. We believe this is due to our emphasis on equity and inclusionary practices as we rethink the way learning can and should occur.

Families are an integral part of our school community. They participate in student-led conferences to celebrate growth, track their child's progress with portfolios that include student reflection and goal setting, and attend exhibitions that showcase student

learning. These are grounding community moments when we can come together to recognize our students' innovation and creativity.

We are fortunate to partner with many local organizations to promote STEAM project-based learning experiences for students. For example, the local Rotary Club donated funding for a 3D printer that we purchased from another local company that sells 3D printers. We also worked with the local Naval Base to receive a grant to build a school garden that we can incorporate into our spring earth science units. We have field experiences planned for the planetarium at Pierce College. Pierce County Conservation will be facilitating learning experiences this spring, as well as donating a rain barrel for our community garden. Harbor Wildwatch is another local organization that comes into our schools to teach about our local habitats and watershed. The students really enjoy learning about our local watershed and how they can help protect it.



## Pillar 1: Reduce Environmental Impact and Costs

### Element 1A: Energy conservation strategies

Describe how your school programs, policies, and actions have reduced the amount of energy used in your building(s).

Pioneer is a new facility that is repurposed from an established site. Peninsula School District purchased the site and facility from the Boys and Girls Club in January 2018. Upon passing a bond, Peninsula School District added on to this facility to become the current site of Pioneer Elementary. Repurposing an existing facility promotes sustainability as opposed to building on a native site and reducing the need for as many new building materials. Furthermore, the site's location is adjacent to multiple other PSD properties, promotes increased access, and consolidates parking for shared interests. Additionally, the architects hired to design the addition were the same architectural firm as the original construction.

Pioneer is designed to maximize and track energy use aligned with EPA guidance and Energy Star. Pioneer was designed with the highest standards in HVAC and major lighting improvements over our existing buildings. Although an existing building was used, a conscious decision was made to upgrade systems to be more energy efficient such as going from fluorescent tube light fixtures to LED fixtures and new, more efficient HVAC units. A percentage of our outlets and lights run by occupancy sensors which shut down power after twenty minutes of no movement. Our lighting is also sensitive to the natural light that passes through windows. As a result, the lighting intensity increases or decreases depending on the amount of natural light in the space, reducing the energy needed.

We have participated in the EPA Energy Star Portfolio Manager program. Our school's energy is primarily provided by hydroelectric dams, which are clean and renewable. Metrics are measured based on yearly consumption and have been directly impacted by the energy savings we have implemented. In addition, Peninsula is exploring options with local agencies/providers intending to implement solar and wind power. The new building is built with recyclable materials, beautiful woodwork, and large floor-to-ceiling windows to take advantage of natural lighting.

Students and staff are educated about energy conservation and encouraged to engage in practices such as dressing appropriately for the weather and restricting personal appliance use in classrooms.

## Element 1B: Water quality, efficiency, and conservation

Describe how your school implemented and is maintaining your water conservation program.

Pioneer's site was designed with conservation in mind. Studies were done on the slope of the land to increase natural irrigation and promote reduced water consumption through natural vegetation and native drought-tolerant plants. As a result, we relocated the stormwater catchment to provide a better flow into the receiving wetlands.

Additionally, all fixtures are low-flow water, including sinks and toilets. Hand washing stations for students in bathrooms have timed faucets and turn off after the allotted time of 35 seconds. Students and staff have been taught to reduce water by using our staff dishwasher and reporting leaks immediately.

Pioneer uses eco-friendly cleaning products as well. We have converted to using Alpha HP, a certified green clean disinfectant on the state and federal certified list; it has little to no health hazards. Pioneer has four water fountains with two refillable water bottle filling stations.

## Element 1C: Waste Management and Product Procurement

Describe your solid waste management plan and practices.

Pioneer has been open as a school for three years. From product procurement to disposal, we are mindful of how we impact our community and the environment. Upon completion, Pioneer contained the following make-up of materials:

- 10% of materials from recycled sources
- 50% of the wood was from a sustainable source
- 20% locally produced materials
- Over 75% of construction waste is diverted from landfill

Pioneer uses various technology tools that reduce our need for paper worksheets. For example, when paper is used, our school purchases paper that is at least 50% post-consumer material, further reducing our footprint as the staff is cognizant of using fewer materials, copying double-sided, and using electronic communication as much as possible.

As students engage in engineering and design projects, we seek partnerships from our community as we seek donations of previously used materials to use in our multiple

maker spaces. These materials may include empty paper towel rolls, bottle caps, lids, yogurt containers, boxes, cans, etc. Students and staff also participate in classroom recycling activities. Signs are posted. Teachers also review what can and cannot be recycled, and students help to ensure their classroom is responsible for reducing waste by using the proper receptacle.

Our Kindergarten, first, fourth, and fifth-grade students have recess and then proceed to a 30-minute lunch period. Working up an appetite before eating and providing enough time to eat reduces the amount of food waste we produce. All students and staff have a 30-minute lunch period. We have purchased worm bin to further reduce our carbon footprint, and students are preparing to dispose of food waste to create compost for our garden this spring.

## Element 1D: Alternative transportation

Describe alternative transportation options to driving in a single occupancy vehicle to and from school and other school facilities.

The Peninsula District has been actively pursuing alternative energy buses. We applied for but were denied an electric bus this fall, but we have recently purchased two propane-powered buses. Propane is a low-carbon, near-zero alternative energy source. Propane-powered school buses produce up to 96% less toxic emissions than diesel buses. With propane autogas buses, students aren't exposed to emissions that can aggravate asthma and cause other health issues. Additionally, many of our students ride the county bus using the Pierce County Youth Pass to get to our traditional and non-traditional school programs.

Due to the magnet school nature of Pioneer and the nature of where students live in proximity to the school, we have very few students who walk or ride their bikes to school. About half of our student population is driven by parents, and the other half of our student body rides the school bus. Students who ride the bus are dropped off and picked up at "hub" bus stops and rally points due to the distance between the bus stops and homes. Our district covers 120 square miles, so with this large area and most of that land in rural locations, our students have no public transportation option. This maximizes the use of our school buses.

## Pillar 2: Improve the health and wellness of schools, students, and staff

### Element 2A: An integrated school environmental health program

Describe how your school implements and measures the success of your integrated environmental health programs and practices to ensure the health and safety of the school community.

Pioneer prioritizes the health of staff and students, starting from the ground up. While a new facility, contractors upgraded existing systems from rooftop units to high-efficiency variable air volume throughout the building, so all systems are on the same replacement cycle. Pioneer follows an Integrated Pest Management (IPM) Plan modeled after the WSU Extension School's IPM plan. In addition, we recently implemented an indoor air quality management plan with the assistance of the PSESD Workers Compensation Trust.

Pioneer did not install wooden playground equipment that contained harmful chemicals such as chromate copper arsenate. Instead, the equipment installed is solid steel, promoting longevity and sustainability.

Within the school facility, all staff is responsible for keeping students healthy by following a health guide to reduce allergens and exposure, known asthma triggers. We have a Guide for Building Care that outlines what is and is not safe in our learning spaces, including rugs, pillows, stuffed animals, and unnecessary decor. These items can trap allergens impacting student and staff health.

The custodial department abides by a green cleaning program that includes using products that are recycled and chemicals that have a low impact on the environment. Pioneer's chemical management program includes training, storage, inventory, spill response, and hazard communication with the updated SDS system.

While Pioneer provides standard drinking fountains in classrooms and common areas, it has also installed two water bottle filling stations to promote healthy drinking habits and reduce materials that would otherwise be recycled and sent to waste. These drinking fountains are cleaned daily.

## Element 2B. High standards of nutrition, fitness, and quality outdoor time for both students and staff

Describe how your school implements high standards of nutrition, fitness, and quality outdoor time for both students and staff.

Pioneer is proud of our emphasis on the whole child, which includes physical well-being. Our campus is adjacent to a local high school, allowing us significant access to many field options, such as a turf field and track. These spaces are used for both our Physical Education and recreational recess activities. Students at Pioneer have 50 minutes of recess daily and an average of 50 minutes of Physical Education per week. Our students' Physical Education classes are scheduled with intention. Rather than a segmented and rotating specialist schedule, our students stay with one specialist for an entire week. This schedule allows our students to develop their fitness skills deeply throughout the week and practice those skills on weeks that they are with another specialist. Additionally, as our classroom teachers teach with the brain in mind, they provide frequent breaks which include both movement and mindfulness. Such activities may include dancing, yoga, cooperative team games, or breathing exercises.

Additionally, Pioneer intentionally planned for and built a covered outdoor play area in its design. This 4,000-square-foot area was designed for this Pacific Northwest school, allowing students to access fresh air and play even in the worst rainstorms.

Student lunches are provided in conjunction with USDA Food Guidelines for nutrition and respond to our students' unique dietary needs. In addition, students are provided with multiple fresh fruit and vegetables to complement their protein and carbohydrate selection daily.

Does your school have a school nurse and/or school-based health center?

Yes

Describe your school's efforts to support student mental health and school climate (anti-bullying programs, peer counseling, etc.)

Pioneer prioritizes the social-emotional development of our students and staff. It is an essential component that allows our students to reach their greatest potential. All classrooms start their day with a Morning Meeting focusing on connection and intention setting. Teachers incorporate social-emotional learning lessons using the Second Step

curriculum throughout their school day, reinforcing our school-wide expectations for conduct.

We build our students' and staff's social-emotional toolbox by teaching various breathing techniques and mindfulness activities to help everyone manage strong emotions. Each classroom is equipped with a calming space filled with student tools for processing strong feelings. Teachers and staff alike teach empathy and problem-solving as the emphasis for all conflict management. Restitution and repair are pillars of working through conflict and building connections with each other.

All these factors, including annual presentations, support Pioneer's anti-bullying stance. As a school community, we have several methods for reporting behavior that can lead up to or is considered bullying. For example, there is a Safe Schools hotline for students or parents; reporting forms are available in the office; students are encouraged to work with an adult they trust; and students will meet with the principal or dean if issues need to be addressed.

With a school of just over 500 students, the principal, dean, and counselor are present in classrooms and common areas. They prioritize seeing kids daily and maintaining positive relationships that help prevent bullying and promote a positive school culture. In addition, we provide three opportunities per year for students to share their perspectives of our school climate using Panorama. Finally, we discuss the results as a staff and adjust our systems and lessons in response to data.

## Pillar 3: Provide effective environmental and sustainability education which incorporates STEM, civic skills, and green career pathways

### Element 3A: Interdisciplinary learning about the key relationships between environmental, energy, and human systems.

Describe how your school integrates and measures students' environmental and sustainability literacy at each grade level, including curriculum and outdoor learning.

The design and building of this brand-new elementary school provide a variety of opportunities, including creating a focus on STEAM education. We chose to use "Project Based Learning" (PBL) as a structure for students to access our academic content. Allowing teachers to create units of study that address standards while having local relevance and allowing for student advocacy. Students apply their learning by creating solutions to local problems and sharing their learning with public platforms. Every grade band has multiple PBL projects incorporating environmental sustainability. Topics range from the importance of pollinators to the human impact on biodiversity to changing patterns in our climate to maintaining clean watersheds.

These units integrate multiple subject areas and are connected across our specialist classrooms. Pioneer Elementary has a dedicated STEAM makerspace and an innovation room. Students learn robotics, programming, design cycles, and communication skills that help them create rich products in their classrooms. For example, students learned how to use WeVideo in their innovation specialist, which is then applied to their plant unit in their classroom when they create videos encouraging our local families to visit our school garden.

Pioneer also strives to connect our students with the local community. We have a connection with the YMCA, where our fourth and fifth-grade students participate in outdoor school. We invite experts from our community to share their knowledge with students and demonstrate future career possibilities. During their "climate heroes" unit, our 2nd/3rd graders zoomed with a climatologist who shared pictures of Antarctica and Greenland. Students also connected with a nonprofit called Harbor Wildlife to learn more about local watersheds before creating solutions to watershed pollution problems.

We continue to use experiential learning at Pioneer because we have seen its impact on students. In our first year of science testing, 74% of our students passed the state

Science assessment. Our climate data also reflects our students' excitement for learning. For example, our most recent Panorama climate survey showed that 93% of our 3rd, 4th, and 5th-grade students agreed with the statement, "My teachers really get me and know my interests, my life outside of school, and how I learn best." 97% agreed with the statement, "I know why everything I am learning at school is important."

Describe professional development opportunities available to your teachers in environmental and sustainability concepts, and the number and percentage of teachers who participated in these opportunities during the past two years.

Pioneer teachers see themselves as learners first, leading them to seek new learning opportunities constantly. Summer of 2020, we launched our school program. At that point, 100% of our teaching staff participated in training that included sequencing and grouping our science standards into units and then looking for opportunities to integrate reading, writing, and math.

In the summer of 2021, we dug deeper into project-based learning with a three-day intensive course with PBL Works, formally the Buck Institute. Thirty teachers attended this training, K-5. A component of this training was to structure our unit planning with authentic, inquiry-based questions that would lead students to make connections to the world around them. Our science standards were embedded in these questions so students could connect to these concepts authentically.

In addition, our teachers K-5 received training on a new district-adopted curriculum, StemScopes. Extensive time was spent looking at the science and engineering practices and how they can be integrated throughout lessons. Pioneer's teachers worked hard to examine the curriculum for hands-on learning experiences that could be incorporated into our PBL units. Several components of this program center on environmental science and sustainability. Students conducted a water purity experiment from the StemScopes curriculum. They paired it with a design challenge teachers had previously developed during their PBL training around creating a water filtration system.

Our staff has participated in two book studies. Every staff member read PBL in the Elementary Grades, and more than 80% of the staff read John Spencer's LAUNCH book. From conversations, our school adopted a common inquiry cycle that students can use when creating and exploring their science standards. This also led to several school-wide design challenges using this common process.

Fifteen of our teachers have attended local OSPI trainings, including an Environmental Empathy class, Novel Engineering, Growing Elementary Science, Tinkering and



Engineering, or The Power of Literacy to Accelerate Phenomenon-Based Science. When teachers returned from these trainings, they worked with their grade band teams to integrate relevant components into their existing PBL units.

For the last year, three teachers have attended OSPI elementary content integration cadre training for the state. This focused heavily on integrating literacy into science units. They have provided many resources to help us purposefully incorporate reading and writing into our environmental science units and all our units.

### Element 3B: Use of environmental and sustainability concepts to develop STEM content knowledge and thinking skills to prepare graduates for the 21st century.

Describe how environmental and sustainability education in your school supports the teaching of science and engineering practices and supports robust general science education that includes a deep understanding of life, physical, and Earth & space sciences.

The learning at Pioneer exemplifies the importance teachers place on the ability of a student to apply their knowledge of the science and engineering standards to a variety of situations. This type of project-based instruction provides context to the learning and skill development for students to become change-makers in their community.

Our LAUNCH cycle, Pioneer's school-wide inquiry learning process aligns closely with the NGSS science and engineering practices. This guides students through making scientific observations and creating prototypes to solve real-world problems. Throughout the process, they clearly define real-life situations, ask questions, analyze data, synthesize information, and receive feedback from peers. The end goal is for them to create a public product to share with an authentic audience. This could be a prototype that helps to solve the scientific problem they are exploring or an informational product to share.

Examples of the inquiry cycle can be found at every grade level and in every unit. While studying sound waves, our K/1 students used drums in the music room to show how vibrations can move cotton balls from across the room. Students made models for water filtration devices, layouts for our school garden, and solutions to extreme weather problems in grades 2-5. Grade 2/3 students collected data on plant growth to determine the optimal growing environment and conditions and created stop-motion videos of

their process. During our Art and Tinkering specialist time, students took apart recycled electronics to study the components and circuitry.

Finally, we received a ClimeTime grant to explore composting. This grant also allows us to build a campus greenhouse to extend our learning time in the garden. We also created a stipend position for a teacher to lead a garden group throughout the year.

**Describe how your school's curriculum connects classroom content to career options that focus on environmental and sustainability field studies and/or careers.**

Pioneer's classrooms are extensions of the real world. We use five core competencies to drive our instructional decisions. We want students to be problem solvers; engaged citizens; communicators; collaborators; and empowered learners. Our educators value and foster these attributes because they are useful tools for future careers, including professions linked to the environmental sciences. The PBL instructional structure we have adopted helps us make clear connections to these fields of study.

Our K/1 students completed a unit on patterns in the sky. They examined how the moon rotates around the Earth and the Earth around the sun. They made connections to NASA engineers and astronauts as they studied space to promote more knowledge of our world. They also brought in a local physicist who had written a children's book on this topic to speak with the kids.

Our 2/3 grade band learned about the impact of water on earth's landforms. To integrate hands-on demonstrations, they connected with a local nonprofit, Harbor Wild Watch. During this grade band's climate unit, the students zoomed with a climatologist who had traveled to Antarctica and Greenland to examine air samples. She shared pictures of her experiments and described what her job was like.

Our 4/5 grade students spent substantial time exploring authentic learning and connecting with experts in the field. They met with a Disc Jockey at a local radio station to learn about radio waves and his role in producing content. Our Innovation specialist also brought in local entrepreneurs to create a "Shark Tank" assembly for these students. Then, on the day of the assembly, they presented original products to the school and received feedback from our local community entrepreneurs to improve their products.

These connections to experts in the field provide depth and context to our units.

### Element 3C: Development of civic engagement knowledge and skills, and students' application of these to address sustainability and environmental issues in their community

Describe students' civic and/or community engagement experiences integrating environmental and sustainability concepts, field studies, and community service at every grade level. Please cite data and/or give specific details in your answer.

Even our youngest learners at the K/1 level are engaging in learning about sustainability and citizenship. Last year they examined which foods decompose the fastest by conducting an experiment with a variety of food items. This year, that knowledge will lead to our composting initiative. Students will learn which items from our cafeteria waste can be composted in composters or worm bins.

Last year, our 2nd and 3rd-grade students engaged in a community unit in which students took on different passion projects to explore the needs and impacts in our community. Some students looked at waste in our waters, some studied the impacts of recycling and waste, some looked at homelessness and basic needs, and others looked at air pollution. Students completed a service project based on their learning which resulted in 100 students giving back to our community. One student conducted a food drive. She created a video articulating the when and why and delivered the goods herself. Another student created a PSA for our families about not idling during parent drop-off and pick-up. Many students picked up trash in their neighborhood, local park, or beach. One student organized a beach clean-up with friends and family.

Our 4th and 5th graders spent time last fall, during election season, learning about legislative and governmental offices. They learned about the electoral college and the political roles governing our cities, states, and country. While in remote learning, they met with Representative Derek Kilmer to learn more about his role in supporting Washington State through the US government. This same grade level also met with a local chemical engineer to study the effects of wastewater in our community. This, paired with this outdoor school experience, helped them to understand the importance of clean drinking water.

**Principal name, date and signature below.**

**Name: Stephanie Strader**

**Date: January 6, 2023**

**Stephanie Strader**