U.S. DEPARTMENT OF EDUCATION

GreenRibbonSchools

U.S. Department of Education Green Ribbon Schools 2013-2014

[ ] Charter [ ] Title I [ ] Magnet [ ] Private [ ] Independent

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

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

School Mailing Address 22620 Sweeney Road SE
(If address is P.O. Box, also include street address.)
Maple Valley, WA 98038
City State Zip

County King State School Code Number* 3589

Telephone (425) 413-6100 Fax (415) 413-6113

Web site/URL www.sles.tahomasd.us E-mail ceverett@tahomasd.us

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

Christina Everett Date 1.31.14
(Principal's Signature)

Name of Superintendent* Mr. Michael Maryanski
(Specify: Ms., Miss, Mrs., Dr., Mr., Other)

District Name* Tahoma School District #409 Tel.(425) 413-3403

I have reviewed the information in this application and certify that to the best of my knowledge all information is accurate. This is one of the highest performing green schools in my jurisdiction.

Michael Maryanski Date 1-31-14
(Superintendent's Signature)

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

Shadow Lake Elementary –Summary of Achievements

A stroll around the Shadow Lake Elementary School campus reveals the long history of environmental stewardship. Shadow Lake students not only are surrounded by native plants, shrubs and trees, they actively cultivate them in the seven themed Shadow Lake Discovery Gardens which include the Discover Washington Garden. Students compost and use plant material from all of the Discovery gardens. These are places created by students, staff and volunteers over many years that give the school a unique look and feel. Shadow Lake has been a designated National Wildlife Federation Schoolyard Habitat since 2005. Students have daily opportunities to increase their appreciation of local wildlife which benefit from the school gardens. Students also participate in after school and summer nature camps through a District sponsored program, Nature Nuts.

Students add to their environmental awareness by creating and growing activities and programs to conserve and recycle resources. Waste-Free Wednesdays are one example of how students work together to reduce lunch waste. Students focus on recycling and composting every day but work even harder each Wednesday to reduce waste to as close to zero as possible during lunch periods. Sustainability is something students learn about and experience in many ways each day at school. Each classroom has recycling containers. Students see waste-saving tips and statistics each week through hallway posters, parent newsletters, and morning announcements. Data is collected and shared; there is even an ongoing waste-bin competition between students and staff, which students often win! Student leaders present at teacher meetings and monitor lunchtime waste, recycling, composting, and TerraCycle containers with raffle prizes of reusable lunch containers as incentives. Students also create garden art with non-recyclable bottle caps to keep them out of the landfill. Students who serve as Green School Ambassadors work before school to ensure that breakfast waste is efficiently managed for composting and recycling. Other students tend to the school's worm farm, which produces vermi-compost to naturally fertilize plants.

Students become familiar with the natural environment not only on their campus, but on an adjacent nature trail and on field trip visits to the nearby Shadow Lake Peat Bog. 4th and 5th grade students in one class partnered with Peter Donaldson and the Cedar River Watershed Project in the creation of an instructional video where students became the voices of raindrops experiencing the purifying effects of a rain garden. Fifth-grade students participate in an environmental camp experience at Camp Casey on Whidbey Island each spring. Shadow Lake has community engagement through family work parties at least twice a year. Students participate in creating and maintaining the gardens and trail.

All Shadow Lake classrooms participate in a Litter Patrol program to collect waste around their campus on assigned weeks. Students share Shadow Lake's efforts and accomplishments on the

Tahoma Sustainability Blog, in parent emails, and in weekly school-wide announcements. Sustainability is woven into our curriculum, providing students with real-world examples and applications of how sustainability works. Environmental awareness is part of the culture at Shadow Lake and will continue to be refined and expanded.

PART III – DOCUMENTATION OF STATE EVALUATION OF NOMINEE

Instructions to Nominating Authority

The Nominating Authority must document schools' high achievement in each of the three ED-GRS Pillars and nine Elements. For each school nominated, please attach documentation in each Pillar and Element. This may be the Authority's application based on the Framework and sample application or a committee's written evaluation of a school in each Pillar and Element.

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: Washington state Office of the Superintendent of Public Instruction

Name of Nominating Authority: Gilda Wheeler. Program Supervisor, Science and Sustainability

(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.

_____ Date 1.31.14

(Nominating Authority's Signature)

The nomination package, including the signed certifications and documentation of evaluation in the three Pillars should be converted to a PDF file and emailed to green.ribbon.schools@ed.gov according to the instructions in the Nominee Submission Procedure.

2014 Green Ribbon Schools Application

Response ID:30 Data

3. New Page

School Profile

School Name

Shadow Lake Elementary

Street Address

22620 Sweeney Road SE

City

Maple Valley,

State

WA

Zip

98038

School Website

http://sles.tahomasd.us/

Principal First Name

Christine

Principal Last Name

Everett

Principal Email Address

ceverett@tahomasd.us

Principal Phone Number

425-413-6100

District and Code

Tahoma School District - 17409

My school's Educational Service District (ESD):
Don't know your ESD? check out our interactive state map.

Puget Sound ESD 121

Application Team Information

Lead Applicant First Name

Kevin

Lead Applicant Last Name

Patterson

Lead Applicant Title

Public Relations Officer

Lead Applicant Email

kpatters@tahomasd.us

Lead Applicant Phone Number

425-413-3409

Application Team Members (Other people who helped prepare this application)

	Name (First and Last)	Title/Department
1	Chris Everett	Principal/Shadow Lake Elementary
2	Liz White	Teacher/Shadow Lake Elementary
3	Dawn Wakeley	Director/Teaching & Learning
4	Lori Cloud	Director/Financial Services

4. New Page

1. Summary Narrative
Summarize the school's efforts in all three pillars. Focus on your commitment and progress towards meeting Green Ribbon School criteria, especially:
Partnerships or memberships the school has developed to meet your green goals.
The benefits of your progress.
The plan to sustain your work.
You may want to return to this question after answering the remaining questions. (Maximum 800 words)

A stroll around the Shadow Lake Elementary School campus reveals the long history of environmental stewardship. Shadow Lake students not only are surrounded by native plants, shrubs and trees, they actively cultivate them in the the seven themed Shadow Lake Discovery Gardens which include the Discover Washington Garden. Students compost and use plant material from all of the Discovery gardens. These are places created by students, staff and volunteers over many years that give the school a unique look and feel. Shadow Lake has been a designated National Wildlife Federation Schoolyard Habitat since 2005. Students have daily opportunities to increase their appreciation of local wildlife which benefit from the school gardens. Students also participate in after school and summer nature camps through a District sponsored program, Nature Nuts. Students add to their environmental awareness by creating and growing activities and programs to conserve and recycle resources. Waste-Free Wednesdays are one example of how students work together to reduce lunch waste. Students focus on recycling and composting every day but work even harder each Wednesday to reduce waste to as close to zero as possible during lunch periods. Sustainability is something students learn about and experience in many ways each day at school. Each classroom has recycling containers. Students see waste-saving tips and statistics each week through hallway posters, parent newsletters, and morning announcements. Data is collected and shared; there is even an ongoing waste-bin competition between students and staff, which students often win! Student leaders present at teacher meetings and monitor lunchtime waste, recycling, composting, and TerraCycle containers with raffle prizes of

reusable lunch containers as incentives. Students also create garden art with non-recyclable bottle caps to keep them out of the landfill. Students who serve as Green School Ambassadors work before school to ensure that breakfast waste is efficiently managed for composting and recycling. Other students tend to the school's worm farm, which produces vermi-compost to naturally fertilize plants. Students become familiar with the natural environment not only on their campus, but on an adjacent nature trail and on field trip visits to the nearby Shadow Lake Peat Bog. 4th and 5th grade students in one class partnered with Peter Donaldson and the Cedar River Watershed Project in the creation of an instructional video where students became the voices of raindrops experiencing the purifying effects of a rain garden. Fifth-grade students participate in an environmental camp experience at Camp Casey on Whidbey Island each spring. Shadow Lake has community engagement through family work parties at least twice a year. Students participate in creating and maintaining the gardens and trail. All Shadow Lake classrooms participate in a Litter Patrol program to collect waste around their campus on assigned weeks. Students share Shadow Lake's efforts and accomplishments on the Tahoma Sustainability Blog, in parent emails, and in weekly school-wide announcements. Sustainability is woven into our curriculum, providing students with real-world examples and applications of how sustainability works. Environmental awareness is part of the culture at Shadow Lake and will continue to be refined and expanded.

5. New Page

2. Is your school participating in a local, state, or nationally recognized green school program (for example, Washington Green Schools, Eco Schools USA, PLT Green Schools, King County Green Schools, Cool School Challenge)?

Yes

Which program(s) are you participating in and what level(s) have you achieved?

	Program	Level in Progress	Level Achieved
1	King County Green Schools		Levels 1, 2 & 3
2	WA Green Schools	Waste and Recycling	In Progress
3	King County Green Schools	Waste and Recycling	Beyond Level III
4			
5			

3. In the past 5 years, has your school, staff or student body received any awards for health, environmental stewardship or action, or sustainability programs?

Yes

Please list the awards you have received and the years you received them.

	Award	Awarded to	Awarded by	Year Received
1	Earth Hero	Brenda Running	King County	2006
2	Terracycle Green Globes	Discovery 4/5	TerraCycle	2013
3	King County Green Schools Assessment	Discovery 3/4/5	King County	2012
4	King County Green Schools Assessment	Discovery 3/4/5	King County	2013
5				

7. New Page

4. About your buildings

Year school opened : 1967
Year of your most recent new construction or major renovation : 1999
Current gross square footage : 63,246
Typical number of months per year that school is in use full-time : 10

5. Has your school constructed a new building or done a major renovation in the past ten years?

No

Please provide the following information:

	New construction	Major renovation
What green build standard was followed? (for example, LEED, CHPS, Green Globes, WA State Sustainable Schools Protocol)		
Did the school meet the standard and at what level?		

6. Do you use EPA ENERGY STAR Portfolio Manager to track and assess energy use and costs?

Yes

What year did you begin using Portfolio Manager?

2009

Have you earned an Energy Star Labeled certification?

No

Please provide the following information

7. Can your school demonstrate a reduction in GHG emissions from an initial baseline?

No

Please provide the following information:

8. Has your school reduced its total non-transportation energy use from an initial baseline?

Yes

Please provide the following information:

Current energy usage (kBTU/student/year) : 6,657.6
Current energy usage (kBTU/square foot/year) : 55.79
Time period measured (initial baseline, minimum of 12 months) : 09/2007-08/2008
Current time period measured (minimum of 12 months) : 09/2012-08/2013
Percentage reduction : 24%
How is the reduction documented? (e.g. ENERGY STAR Portfolio Manager, Utility Manager, district database)? : District RCM program, ongoing tracking since 2007.

9. What percentage of your school's energy is obtained from renewable sources?

	Type(s)	Percentage(s)
On-site renewable energy generation	None	0%
Purchased renewable energy	None	0%

8. New Page

10. Can the school demonstrate a reduction in total water consumption from an initial baseline?

Yes

Please provide the following information:

Baseline water use (gallons/year) : 403,920
Baseline time period measured (minimum of 12 months) : 09/2008-08/2009
Current water use (gallons/year) : 381,480
Current time period measured (minimum of 12 months) : 09/2011-08/2012
Percentage of reduction in domestic water use : 6% overall
Percentage of reduction in irrigation water use : 6% overall

11. What has the school done to reduce domestic and irrigation water use? (e.g., drought tolerant landscaping, low-flow fixtures, alternate sources for irrigation) (Maximum 100 words)

Shadow Lake's many native plants require little to no water from irrigation. Plants are in designated flower beds in front of the building and other planting areas. They include: Rhododendrons, lilac, sedum, Ocean Spray, daffodils, tulips, lupine. Serviceberry and sword ferns reside as natives in our Discover Washington garden. The school campus is bordered by second-growth fir trees and native vegetation, such as salal and ferns. Playground surfaces are permeable and low-maintenance ground cover and wood chips require no irrigation. Fallen bird feeder seeds sprout to create vegetation that also holds moisture in our sloped courtyard beds.

12. Describe site improvements that have reduced stormwater runoff and/or reduced impermeable surfaces. (Maximum 100 words)

Rain garden installation in spring 2012 partnering with the City of Maple Valley. Also, in the spring of 2013, we added a permeable surface under two benches on a slanted section of our courtyard to help reduce the amount of runoff in this area of our campus. New ground cover and shrubs were planted in beds around our courtyard lawn in 2013 which also reduce stormwater runoff at Shadow Lake. Plans are underway to build a native plants demonstration garden outside our office and to teach the role of native plants with stormwater runoff.

13. The school's drinking water comes from:

Public water source

Describe how the well is protected from potential contaminants. (Maximum 50 words)

14. Describe how you control lead in drinking water. (Maximum 50 words)

Our water, supplied from the local water utility, comes from the Cedar River Watershed. The watershed, over 90,000 pristine acres in south King County, is an unfiltered surface water supply which does not contain any lead. Lead can leach from plumbing and we use lead-free solder and galvanized piping.

9. New Page

15. What is the school's recycling rate (i.e., percentage of solid waste that is diverted from landfilling or incinerating due to recycling and/or composting)?

Please use the formula below to calculate your recycling rate. See an example

A - Monthly garbage service in cubic yards* (garbage dumpster size(s) x number of collections per month^ x

percentage full when emptied or collected). : 25.6
B - Monthly recycling volume in cubic yards* (recycling dumpster sizes(s) x number of collections per month^ x percentage full when emptied or collected). : 22.4
C - Monthly compostable materials volume(s) in cubic yards* (food scrap/food soiled paper dumpster size(s) x number of collections per month^ x percentage full when emptied or collected). : 4
Recycling Rate = (B + C) ÷ (A + B + C) x 100 : 50.76

16. What percentage of your school's total office/classroom paper content by cost is post-consumer material or fiber from forests certified as responsibly managed?

0%

17. What percentage of the total office/classroom paper content by cost is totally chlorine-free (TCF) or processed chlorine free (PCF)

100%

18. Describe the school's efforts to reduce and recycle solid waste. (Maximum 100 words)

Students and staff are fully engaged in reducing and recycling every day but Wednesdays lead with reduced waste through our Waste Free Wednesday initiative. We highlight waste saving tips and statistics each week through hallway posters, parent newsletters and morning announcements. Data is collected and shared with an ongoing waste bin competition between students and staff, which students often win! Student leaders present at teacher meetings, monitor lunchtime waste, recycling, composting, and manage TerraCycle containers along with raffle prizes of reusable lunch containers as incentives. Students created garden art with non-recyclable bottle caps to keep them from the landfill.

10. New Page

19. What percentage of your students walk, bike, bus, or carpool (2 + students in the car) to and from school?

90% by bus, 10% driven by parent

How is this data collected and calculated? (Maximum 50 words)

90% of students take the bus according to October bus counts used for apportionment. The remaining 10% arrive via individual vehicle driven by parents or carpool.

20. Has your school implemented any of the following? (Check all that apply)

A well-publicized no idling policy that applies to all vehicles (including school buses).
Vehicle loading/unloading areas are at least 25 feet from building air intakes, doors, and windows.

11. New Page

21. This concludes Pillar 1. Describe any other efforts to reduce environmental impact with a focus on innovative or unique practices and partnerships. (Maximum 200 words)

Unique partnerships. We partner with the WA Native Plant Society for grants and volunteer hours to build and maintain gardens and trail. We received a grant from the Muckleshoot Tribe to fund an art sculpture depicting the salmon life cycle. We have received funding from the King County Master Gardener Foundation for vegetable and flower gardens. We have a small Environmental Learning Center (aka Nature Nut Club House) which provides storage of educational materials such as binoculars, magnifying glasses and a Nature Museum as well as garden and wildlife supplies and tools. We use large plastic recycled barrels for garden containers. For the past five years, Tahoma has worked with a dedicated contract Resource Conservation Manager (RCM) to streamline resource conservation efforts, track progress and communicate results. With the help of the RCM

program, the district has seen significant operational cost savings, and expanded communication of it's goals and progress into the community at large, and in particular, at Shadow Lake. Examples:network printers were installed in place of personal printers, which have decreased by 90 percent. Reminders are posted to turn off lights in areas not being used. Holiday schedules have been put in place for both heating and lighting.

13. New Page

22. Does your school have an Integrated Pest Management program?

Yes

23. Describe your efforts to reduce pesticide use. (Maximum 50 words)

The District uses almost no pesticides. Small projects that require treatment are outsourced to a third-party professional. In the
garden we use only natural pesticides such as soaps, vinegar and lady bugs.

24. Which of the following practices does your school employ to minimize exposure to hazardous contaminants? (Please check all that apply)

Our school has identified and properly removed sources of elemental mercury and prohibits its purchase and use in the school.
Our school has tested all frequently occupied rooms at or below ground level for radon gas and has fixed and retested all rooms with levels that tested at or above 4 pCi/L or our school was built with radon resistant construction features and tested to confirm levels below 4 pCi/L.
Our school does not have any wood playground equipment or other structures that contain chromate copper arsenate or we have identified these structures and have taken steps to reduce exposure.

Describe the specific actions you have taken to ensure that frequently occupied rooms test below 4 pCi/L for radon. (Maximum 50 words)

Our school has tested all frequently occupied rooms at or below ground level for radon gas and has fixed and retested all rooms
with levels that tested at or above 4 pCi/L or our school was built with radon resistant construction features and tested to
confirm levels below 4 pCi/L.

Describe the specific actions you have taken to reduce exposure to chromate copper arsenate. (Maximum 50 words)

Wood treated with CCA no longer used. Pressure treated wood is limited to student gardens, portable ramps, and playground
equipment. Student gardens built with CCA-free treated lumber. As ramps are repaired and replaced, metal decking is used.
Monthly inspections of playground equipment with repairs and replacements being CCA free.

25. Does your school have an Indoor Air Quality management Plan modeled after the EPA's IAQ Tools for Schools or another national recognized model?

No

Provide the following information about your Indoor Air Quality Management Plan:

26. What have you done to minimize exposure and protect students and staff from the following contaminants: carbon monoxide, chemicals, asthma triggers and mold? (Maximum 100 words)

Our school has a chemical management program that includes: chemical purchasing policy, storage and labeling, training and handling, hazard communication, spills clean up and disposal, and selecting EPA's Design

for the Environment approved cleaning products.
All filters are changed semiannually and inspected by the HVAC mechanic on a regular basis.
Custodians and maintenance personnel are trained to monitor regularly for leaks, condensation and mold. All issues identified are addressed immediately. Any mold found is removed and all surrounding areas are cleaned with bleach and water. Humidity is
controlled by the HVAC system and proper use of outside air (20%).

27. Describe actions your school takes to ensure that all classrooms and other spaces are adequately ventilated with outside air, consistent with state or local codes, or national ventilation standards (Maximum 100 words)

The district has hired a full-time state licensed HVAC mechanic who oversees the system. This individual monitors the system
to ensure proper ventilation (20% outside air). The school HVAC system is equipped with a global system where the
economizers are easier to monitor. All filters are changed semi-annually by the custodial staff and inspected by the district HVACmechanic. Any air quality concerns are sent directly to the district insurance representative who works closely with the district
insurance company and maintenance department to address any concerns or issues.

28. List the types of dangerous waste (WAC 173-303) generated by the school and how each type is managed. Include all aspects of management: storage, labeling, transportation, recycling, record keeping and disposal. (Maximum 100 words)

Custodians and teachers diligently track expired chemicals. The District outsources its hazardous waste disposal to Clean Harbors, a third-party vendor. All disposals are tracked by chemical and quantity. The District uses no pesticides except in unusual situations where herbicides and other green efforts have not been successful. When this occurs, a third-party professional is used.

29. Does your school have a comprehensive green cleaning plan?

No

Describe your school's comprehensive green cleaning plan, including product standards. (Maximum 100 words)

14. New Page

30. Which practices does your school employ to promote nutrition, physical activity and overall school community health? (Check all that apply)

Our school manages a food garden either on-site or in close proximity to our building.
Over the past year, our students spent an average of at least 120 minutes per week (for middle and high schools) or 90 minutes per week (for elementary schools) in school supervised physical education.
At least 50% of our students' annual physical education and physical activity (including recess) takes place outdoors.
Our school integrates health measures into assessments.

Describe your school's Coordinated School Health Program. (Maximum 100 words)

Your school's USDA Healthier School Challenge

Describe your school's Farm to School partnership. (Maximum 100 words)

Describe the type of outdoor exercise opportunities and nature-based recreation available to

students. (Maximum 100 words)

Elementary Health and Fitness emphasizes healthy choices. One unit focuses on recess games, teaching children to take advantage of positive participation and outdoor climbing structures. Students participate in nature walks and enjoy the beauty of the many school gardens and a quarter-mile forest nature trail. Students are recognized for reaching mileage benchmarks at 5,10,15,20 and 26 miles with a year-end awards. Work in the school gardens has become an option for students to self-manage behavior and is open during recess. TLC after-school and summer camps offer opportunities for nature-based recreation. All fifth graders participate in a three-day, overnight environmental camp.

Describe how you integrate health measures into your school's assessments. (Maximum 100 words)

Health and fitness assessments are integrated on a daily basis requiring thinking skills that place an emphasis on personal goal setting and decision making to achieve a healthy lifestyle. Unit assessments help students connect classroom activities to a lifetime of personal fitness. Unit assessments include classroom-based assessments, fitness testing (cardio, muscular strength, muscular endurance and flexibility) and self-assessments that monitor personal progress and self-reflection. At the building level students in grades 3-5 participate in an annual school climate survey and the results drive annual school climate site plan goals with accountability for goal achievement to the school board.

15. New Page

31. This is the end of Pillar 2. Describe any other efforts your school has made to improve health, nutrition and fitness. Hightlight innovative or unique practices and partnerships. (Maximum 100 words)

The Shadow Lake PTA sponsors and organizes lunch recess walking and running on Mondays and Wednesdays for students and staff. Student achievement and participation is recognized by Shadow Lake Staff and our PTA. In working on our goals for Waste-Free Wednesdays, students are more involved in packing themselves a nutritious lunch in amounts they will eat and utilize reusable containers for their healthier lunch options.

17. New Page

32. What does your school do to support environmental and sustainability literacy? (Check all that apply)

Our school has an environmental or sustainability literacy requirement.
Our school incorporates the Washington State K-12 Integrated Environmental and Sustainability (ESE) Learning Standards and concepts into curriculum and programs.
Environmental and sustainability concepts are integrated into assessments.
Professional development opportunities in environmental and sustainability education are provided for all teachers.
Our school offers meaningful outdoor learning opportunities at each grade level.

Describe your school's environmental or sustainability literacy requirement. (Maximum 200 words)

We believe sustainability literacy is critical for all students and have intentionally designed sustainability concepts including environment, culture and economics into core curriculum. Units include outdoor learning experiences and civics components. At Grade 3, “Land and Water” integrates the study of salmon. Creation of salmon rubbings integrates art. Students practice reading and writing skills, engaging with fiction and non-fiction text materials that include a dramatic production, “Come Back Salmon.” Civics education is at the heart of the unit as students develop rules to address water conservation. A new stormwater component has students observing and mapping stormwater on their campus and examining the function of a rain garden. At

Grade 4, students learn how government legislation can preserve natural resources such as the Shadow Lake Bog and our national park system. Students plan a virtual trip to a national park and teach the importance of sustaining these unique areas for future generations. At Grade 5, students revisit stormwater through an engineering design project. Outdoor learning instills a sense of stewardship for our environment, providing all students critical thinking skills and Habits of Mind to make reasoned judgments about environmental issues.Our staff has received professional training with Project Learning Tree.

Describe how environmental and sustainability concepts are taught and into which subjects they are integrated. (Maximum 300 words)

The intentional integration of sustainability concepts into the core curriculum is accomplished primarily in our integrated units. Here study of science and social studies concepts provide real issues and problems for students to apply reading, writing, and critical thinking skills. In a semester-long integrated units, third grade students learn about the challenges of preserving and protecting salmon, including how salmon depend on water quantity and quality to survive. The students visit the Landsburg Diversion Dam on the Cedar River to see how fish ladders work. Students learn how water needs for both humans and salmon can be balanced and apply problem solving to develop rules that will support water quality and conservation. They are formally introduced to the concept of sustainability, learning how to balance human needs with the needs of the environment. At fourth grade, students explore sustainability in Washington state. They study forestry to learn the concept of “renewable resources.” They practice critical thinking as they consider land management issues. Students learn how government legislation can preserve natural resources such as our local Shadow Lake Bog and our national park system. Students plan a virtual trip to a national park and teach others about the importance of sustaining these unique areas for future generations. The goal of both units is to create environmentally responsible citizens who are committed to a sustainable future. We are beginning to integrate systems thinking tools and a prototype curriculum project is currently underway with two teachers from Shadow Lake. In addition, the priority the district and school administration has established around sustainability influences many choices teachers make in extension activities for students. This results in a vibrant focus on sustainability that truly comes alive at Shadow Lake through curriculum, instruction and active student leadership.

Describe the courses or curriculum offered (e.g., AP Environmental Science, CTE Green Sustainable Design and Technology, and College in the High School Climate Science Courses). (Maximum 200 words)

Describe how you integrate environmental and sustainability concepts into classroom based or schoolwide assessments, how you measure proficiency, and what percent of your students score "proficient" or better. (Maximum 200 words)

Grade 3 students complete “Whose Rule?,” a state-developed classroom-based assessment. They apply their understanding of the needs of salmon, including water quality and quantity, to create a proposed class rule that will promote water conservation. Students work in groups to develop an original poster to promote their rule. In a Land and Water unit of study, students design a landscaped homesite and test the effectiveness of their design in real-world situations. Students complete the Grade 4 “You Decide!” classroom based assessment, learning about local government by proposing a rule that would help to sustain the Shadow Lake Bog for future students. Students consider the points of view of stakeholders who have a vested interest in the bog, Friends of the Bog, school children like themselves, and the plants and animals that live there. They create a proposal that could be presented to the Maple Valley Community Council to raise awareness about the bog and to support actions to ensure a safe and healthy environment. At Grade 5, students find stormwater pollution solutions for our school campus. Students at all three grade levels show evidence of meeting standard as defined by the project rubrics for each assessment or unit of study.

Describe professional development opportunities available to your teachers in environmental and sustainability standards. Include the percentage of teachers who participated in these opportunities for the 2012 - 2013 school year. (Maximum 200 words)

All Grade 3 teachers participated in training focused on water conservation, the life cycle of salmon, and how

fish ladders work to preserve and protect salmon in preparation for the Grade 3 field experience to the Landsburg Diversion Dam. All 3rd grade teachers were also introduced to the new Stormwater curriculum, learning about rain gardens, grey and green infrastructure, and Best Management Practices (BMPs). Grade 4 teachers received training on the unique environment at the Shadow Lake Bog, including nature observation skills, critical thinking skills and Habits of Mind. New teachers receive support prior to taking their children on field experiences. The new stormwater engineering curriculum for Grade 5 is complete and teacher training scheduled for spring 2014. All Shadow Lake staff were trained by Green Team student leaders on recycling, waste management, composting and water conservation. Leadership for the District Green Team Leaders is provided by one of the 5th-grade teachers at Shadow Lake and she is attending and presenting at the National Green Schools Conference, March 2014. Part of the commitment for that opportunity is attending other sessions and bringing back learning to both the building and district staff, as well as the other Green Team Leaders.

Describe your students' meaningful outdoor learning experiences at each grade level. (Maximum 300 words)

Shadow Lake has a deep commitment to outdoor learning experiences and has led the way in the district in the development of outdoor classrooms including the many school gardens, native landscape plantings, and a nature trail through the bordering forest. Classroom teachers regularly take advantage of the wonderful opportunities at the school, whether it is through exploration of the ABC garden at primary, taking observations and measurements of spring bulb growth in a classroom garden, or journal writing in the forest amphitheatre. Off-site field experiences directly tied to curriculum include: Grade 1, Saltwater State Park beach life exploration; Grade 3, Landsburg Diversion Dam salmon ladders; Grade 4, Shadow Lake Bog; Grade 5, Camp Casey 3 day-Environmental Experience. In addition, optional zero hour (before and after school) opportunities exist for students and families to take advantage of enrichment learning. For example, our Zero Hour Green School Ambassadors constructed a new bird feeder for our campus and developed criteria for the best placement of the feeder this past year. The extended daycare and summer programs also use the outdoor classrooms at Shadow Lake to enrich learning and experiences for students and have assumed care for the worm bin over the summer months. Students in the school's Discovery classes (highly capable) have created worm bins that are used to enrich the soil in the gardens. The Nature Nut program has provided a vegetable garden over the past couple of years and will be donating to the local Maple Valley food bank. Shadow Lake families water and weed our rain garden over the summer months and parent helpers and staff assist students as they learn about and care for the rain garden during the school year.

18. New Page

33. How does your school use sustainability and the environment as a context for learning skills and content in science, technology, engineering, and mathematics skills and content knowledge? (Maximum 200 words)

Shadow Lake students integrate content and problem solving skills with their environmental learning. They perform worm bin calculations of volume and proportions to prepare new bedding after vermicompost harvest and find waste/compost/recycle weight as we plan our new breakfast composting program. Research is underway to determine needed native plant additions to our campus near our office area to prevent erosion and runoff and weeds. Junior high mentors assist Shadow Lake students with our daily TerraCycle collections and process the collected items together. Shadow Lake students have written persuasive letters to our legislators urging them to support measures that promote conservation and alternative energy development.Green School Ambassadors prepare and present displays for energy conservation using climate kits to educate parents and students at Curriculum Night in the fall and at our Celebration of Learning in the spring. Students also share displays for our worm bin, Shadow Lake TerraCycle collection brigades, our rain garden progress/maintenance, and passion projects like our Orca adoption project. Family gardening with our Shadow Lake Nature Nuts Program and students educating our Shadow Lake community about our earth-friendly programs and practices at Shadow Lake Elementary all promote a healthy and sustainable lifestyle.

34. How does your school use sustainability and the environment as a context for learning about green technologies and career pathways? (Maximum 100 words)

We will illustrate through our stormwater curriculum where students study salmon habitat, including how stormwater is the number one polluter of the Puget Sound. Strict regulations govern stormwater management, including funding to employ engineers specializing in stormwater. Students learn what these engineers do and replicate thinking process they use when they problem-solve. Students investigate the role of the stormwater engineer, learn about runoff, examine maps, put on their engineering hats and critically look at the design of their school yard, generate ideas to improve runoff and consider stakeholders with possible solutions. After evaluating solutions, the students select one to implement.

19. New Page

35. Describe your students' civic and/or community engagement experiences integrating environmental and sustainability topics/concepts, outdoor learning, field studies, community service, etc. (Maximum 200 words)

All sustainability curriculum includes a Call to Action, promoting civic and community engagement. Grade 3–Whose Rule? Students brainstorm rules to conserve water, taking ideas generated to message the community about the importance of their rule to conserve water. Classroom Service Projects make contributions to promote water or energy conservation, recycling, reuse, composting, beautification, education, or service. Grade 4–Student Reflection and Letter Writing. Students reflect on the field experience by writing a letter to a Shadow Lake Bog board member, sharing new learnings and supporting the work of the board to preserve and protect our community's natural treasure – the Shadow Lake Bog. Grade 4–You Decide. Students apply their learning to advocate for a position related to our unique local resource, the Shadow Lake Bog. Students identify a law they propose to preserve that would protect the Shadow Lake Bog. Green Team Ambassadors wrote persuasive letters to advocate for legislative conservation measures and animal rights. Student leadership promotes community and family engagement, illustrated by the Shadow Lake Nature Nuts program donation of produce to our neighbors--the Maple Valley Presbyterian Church to support members in need. Students take gardening knowledge and encourage their parents to grow gardens at home.

20. New Page

36. This is the end of Pillar 3. Describe any efforts your school has made to provide effective environmental and sustainable education. Highlight innovative or unique practices and partnerships. (Maximum 200 words)

High school Green Team students wrote a State Farm Sustainabilty grant to install rain gardens at our schools. Shadow Lake Green Team students were active participants in determining the location, performing perk testing and planting. Signage educates families and visitors and our Green Team raised funds for recycled-material benches placed near the garden. Well attended by all families annual Celebrations of Learning provide an opportunity for all students to showcase their learning and provides Green Team Leaders an authentic audience for presentations. Student leaders have presented on a variety of sustainability topics including how to set up a worm bin for composting; complete with starter worms from Shadow Lake! In another example, environmentally-conscious students at all grade levels gathered at Shadow Lake for our first Green Team Bash to reflect on 2012-2013 projects and planned ahead to our 2013-2014 year. Sustainability education is integral to our curriculum and the elementary experiences provide a foundation of units beginning in kindergarten and culminating in Grade 12 that use the environment as a context for learning, investigate environmental challenges, promote critical and creative thinking, and incorporate a call to action where students contribute to improving the local and world environment.

22. Thank You!

Email Confirmation

Jan 06, 2014 21:42:23 Success: Email Sent to: kpatters@tahomasd.us