



2014-2015 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 Pre-K-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 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.
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 2014-2015

Charter Title I Magnet Private Independent

Name of Principal: Mr. David Estes

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

Official School Name: Ponaganset High School

(As it should appear on an award)

Official School Name Mailing Address: 137 Anan Wade Road North Scituate, RI 02857

(If address is P.O. Box, also include street address.)

County: Providence State School Code Number *400093:

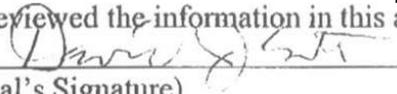
Telephone: 401-710-7500 Fax: 401-647-3926

Web site/URL: www.fg.k12.ri.us E-mail: rmccurdy@fgschools.com

*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.

I have reviewed the information in this ap



(Principal's Signature)

Date: 1/15/2015(Principal's Signature)

Name of Superintendent: Dr. Michael Barnes

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



District Name: Foster-Glocester Regional Schools

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

Michael Barnes
I have reviewed the information in this application.

perintendent's Signature)

Date: 1/15/15

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: Rhode Island Department of Education

Name of Nominating Authority: Deborah A. Gist, Commissioner

(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.

Deborah A. Gist

(Nominating Authority's Signature)

(Nominating Authority's Signature)

SUMMARY AND DOCUMENTATION OF NOMINEE'S ACHIEVEMENTS

Provide a coherent "snapshot" that describes how your school is representative of your jurisdiction's highest achieving green school efforts. Summarize your strengths and accomplishments in all three Pillars and nine Elements. Then, include documentation and concrete examples for work in every Pillar and Element.

SUBMISSION

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.

OMB Control Number: 1860-0509

Expiration Date: February 28, 2015

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.

Pillar I: Reduce environmental impact and costs.

Ponaganset High School is deeply committed to reducing environmental impact and energy costs, creating the best possible learning environment for students and faculty, and providing outstanding opportunities in environmental and sustainability education. Ponaganset High was among the first schools participating in the RI Solar on Schools program and the twenty photovoltaic panels have been generating clean electricity for over a decade.

During the renovation process of Ponaganset High School in 2009 extensive focus and work was put into saving energy, reducing costs, reducing environmental impact and building the best possible school. To meet the goals of the school community an Energy Subcommittee was created to determine and implement the most efficient and feasible energy systems. The Biomass heating system is perhaps the best example of renewable energy use in our school. The Biomass heating system uses waste wood chips from the local lumber industry and uses them to heat the entire school, providing huge savings compared to oil, reducing emissions, and benefiting the local economy.

Improved insulation, energy efficient windows, computerized HVAC systems, room occupancy sensors, and daylighting were also implemented in the renovation and expansion of Ponaganset High School. These energy saving and environmentally beneficial building features were funded through a \$12,000,000 partnership with Energy Services Company (ESCO) ConEdison Solutions. Maximizing the beauty of the natural environment, the school campus is primarily natural forest interspersed with scenic trails for athletic and recreational use.

Pillar II: Improve the health and wellness of students and staff.

Health and wellness of students and staff is a high priority at Ponaganset High School. At the facilities level the school's computerized HVAC system controls the Energy Recovery Ventilation Systems (ERV's) to filter any particulate matter from the air and ensure healthy air quality for all students and faculty. Ponaganset High School has implemented the EPA IAQ Tools for Schools and has established an Indoor Air Quality Plan. High quality lighting was also installed throughout the school during the renovation and includes natural daylighting installations along with energy efficient windows and lighting to ensure a high performance learning environment.

Ponaganset High School has a comprehensive Wellness Policy addressing the cornerstones of good health including proper nutrition through healthy food and beverages, cafeteria climate, and physical activity. Our school staff includes four guidance counselors, a social worker, a psychologist, and a drug and alcohol counselor. Our CAST (Citizens and Students Together) program supports the work of both Youth-to-Youth and STARS (Students Taking Action for Real Situations) which are organizations promoting healthy lifestyles and student leadership. STARS in particular supports activities through our advisory program which focus upon improving the emotional environment of the school and includes anti-bullying and other programs.

Pillar III: Provide effective environmental and sustainability education, incorporating STEM, civic skills and green career pathways.

Environmental and Sustainability Education is a major focus at Ponaganset High and students have demonstrated renewable energy technologies at both the state and national level through innovative projects including a fuel cell powered rock and roll band and electric-fuel cell vehicle (www.protium.us). These renewable energy projects led to the development in 2003 of the Alternative Energy and Sustainable Systems classes that are offered at the school. Students in these classes explore a wide variety of renewable energy technologies including hydrogen fuel cell, photovoltaic and hot water solar power, wind, electric vehicle and battery technology, biodiesel, aviation biofuels, and other biofuels. In 2008 a group of students and their science teacher demonstrated the viability of biodiesel with the Coast to Coast Biodiesel Pickup Project, a 7,000 mile round trip using pure biodiesel (www.biodieselpickup.blogspot.com). With the goal of combining academics with real-world applications for sustainability, student research has taken place on the feasibility of biodiesel blends for our school buses with the long term goal of using biodiesel blends to meet our transportation needs.

Students also demonstrated fuel cell technology by creating a street legal, zero emission EV-Fuel Cell Model T, a project that was covered in Hot Rod magazine. These innovative projects led to a \$984,000 DOE

grant for the construction of an Alternative Energy Lab dedicated to renewable energy education. As part of this grant a small solar building was built from scratch by students in the STEM Academy. Ponaganset High students also learn about and work with a wide variety of renewable energy technologies and receive college credits through Project Lead The Way.

Ponaganset High school's Agriculture Department is also committed to environmental and sustainability education. With two greenhouses, aquaculture facilities, and a sustainable gardening area, Agricultural students learn about and work with sustainable agriculture embedded throughout the multi-year plant and animal systems curriculum.

To meet our school's recycling needs, student volunteers in the recycling club collect bins of paper and plastic bottles from every classroom on a weekly basis, keeping over ten tons of material per year out the landfill. These materials are reprocessed into useful products, saving resources, landfill space, and dollars in trash fees.

The majority of the school grounds is devoted to ecologically beneficial uses with naturally forested areas interspersed with scenic foot trails used by students, faculty, and community members for athletic events and recreation. The school grounds include a pond that is used for canoeing and kayaking instruction with physical education students and science students in biology and other classes.

Over the years students from Ponaganset have gone on to college and careers in the areas of Environmental Engineering, Alternative Energy, and other Sustainability related fields. A noteworthy example is Chris Charest, who as a Ponaganset student worked with fuel cells and electric vehicles in Alternative Energy Class, interned with GM's fuel cell division while attending Kettering University, and is now a Mechanical Engineer in GM's electric motor division working on the latest Electric Vehicle technologies.

Summary Narrative: Provide a narrative describing your school's efforts to reduce environmental impact and costs; improve student and staff health; and provide effective environmental and sustainability education. Focus on unique and innovative practices and partnerships.

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Ponaganset High students have demonstrated renewable energy technologies at both the state and national level through innovative projects including a fuel cell powered rock and roll band and electric/fuel cell vehicle (www.protium.us/band). These renewable energy projects led to the development in 2003 of the Alternative Energy and Sustainable Systems classes that are offered at the school. Students in these classes explore a wide variety of renewable energy technologies including hydrogen fuel cell, photovoltaic and hot water solar power, wind, electric vehicle and battery technology, biodiesel, aviation biofuels, and other biofuels. In 2008 a group of students and their science teacher demonstrated the viability of biodiesel with the Coast to Coast Biodiesel Pickup Project, a 7,000 mile round trip using pure biodiesel (www.biodieselpickup.blogspot.com/). Students also demonstrated fuel cell technology by creating a street legal, zero emission EV/Fuel Cell Model T, a project that was covered in Hot Rod magazine and other media. These renewable energy projects led to a \$984,000 DOE grant for the construction of an Alternative Energy Lab dedicated to renewable energy education. As part of this grant a small solar building was built from scratch by students in the STEM Academy (formerly: Tech Ed department). Ponaganset High students also learn about and work with a wide variety of renewable energy technologies and receive college credits through Project Lead The Way.

Ponaganset High school's Agriculture is also committed to environmental and sustainability education. With two greenhouses, aquaculture facilities, and a sustainable gardening area, Agricultural students have numerous opportunities to explore and report upon sustainable agriculture that is suffused throughout the curriculum beginning with the intro classes moving into the plant system and animal systems pathways.

1. Is your school participating in a local, state or national school program, such as EPA ENERGY STAR Portfolio Manager, EcoSchools, Project Learning Tree, or others, which asks you to benchmark progress in some fashion in any or all of the Pillars?

(x) Yes () No Program(s) and level(s) achieved: Energy Star Portfolio Manager

2. Has your school, staff or student body received any awards for facilities, health or environment?

(x) Yes () No Award(s) and year(s)

AP Environmental Science Teacher Dave Moscarelli

2014 Rhode Island Teacher of the Year

Science Teacher Ross McCurdy

2004 Rhode Island Earth Day Environmentalist of the Year Award

2006 "Best Paper" Award for

"Establishing Fuel Cell Education in the High School"

American Society of Engineering Educators, Chicago National Conference

2007 Fuel Cell Seminar: Doug B. Larson Award for

Excellence in Energy Education

2007 Outstanding Teacher Award, RI American Chemical Society

2008 Teacher of the Year Award, Northern RI Conservation District

2009 Rhode Island Air Force Association Teacher of the Year

Students Zane Lewis, Seth Keighly, and Wylie Smith

2009 Rhode Island Attorney General's Justice Award for

Coast to Coast Biodiesel Pickup Project

Student Fuel Cell Team

2010 Senator John H. Chafee Environment Council of Rhode Island

Outstanding Conservation Project for Fuel Cell Model T hot rod

Pillar I: Reduced Environmental Impact and Costs

Energy

1. Can your school demonstrate a reduction in Greenhouse Gas emissions?

(x) Yes () No

Percentage reduction: 35% from FY '09-FY '14

Baseline: Year ending June '09 (Jul '08-Jun '09)

Current: Year ending FY '14 (Jul '13-Jun '14)

Initial GHG emissions rate (MT eCO₂/person):

1,923MT eCO₂ Total annually

2.29 MT eCO₂/student

Final GHG emissions rate (MT eCO₂/person):

1,248 MT eCO₂ Total annually

1.83 MTeCO₂/student

How did you calculate the reduction?

Using EPA's Energy Star Portfolio Manager Tool, emissions were calculated by generating a "Statement of Energy Performance" for the baseline year (year ending June '09) and the current year (year ending June '14). Annual GHG emissions is provided on that document. Emissions per student was calculated using a student enrollment value of 672.

2. Do you track resource use in EPA ENERGY STAR Portfolio Manager? (x) Yes () No

If yes, what is your score?

Current (year ending FY 2014): 53

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

(x) Yes () No *8% reduction in total energy use*

How did you document this reduction?

This was documented using the "Statement of Energy Performance" generated by EPA's Portfolio Manager Tool. The statement provides total energy use (kBtu) for FY '09 and FY '14, including electric, fuel oil, and wood utilities. The percentage reduction was calculated from these two values.

4. What percentage of your school's energy is obtained from:

On-site renewable energy generation: 47% Type: *Biomass Heating System*

In FY 2014 47% of the school's total energy consumption (kBtu) was obtained from renewable energy generation. This value was provided by EPA's Portfolio Manager Tool after uploading the school's energy consumption for its electric, fuel oil, and wood utility.

5. In what year was your school originally constructed? 1965

What is the total building area of your school? *226,540 square feet*

6. Has your school constructed or renovated building(s) in the past ten years? (x) Yes () No

For new building(s):

Percentage building area that meets green building standards: 100%

Certification and year received: _____N/A_____

Total constructed area: 25,556 sqft

For renovated building(s):

Percentage of the building area that meets green building standards: 75%

Certification and year: _____N/A_____ Total renovated area: 207,483 sqft

Water and Grounds

7. Can you demonstrate a reduction in your school's total water consumption from an initial baseline?

The water requirements of Ponaganset High School are entirely met with on-site well water. During renovation of the buildings water saving technology was researched, but since more than enough water is provided on the grounds and is then returned to the aquifer through a computerized state of the art septic

system, the funds considered for water saving technology were wisely utilized for other energy saving applications that would provide greater benefit.

8. What percentage of your landscaping is considered water-efficient and/or regionally appropriate? 100%

Types of plants used and location: grass and indigenous trees. The football field is the only area of the entire campus that is watered. To ensure proper hydration and water conservation the football field sprinklers are on computerized timers.

9. Describe alternate water sources used for irrigation.

All our water needs are met through on site wells eliminating the need for alternate water sources for irrigation.

10. Describe any efforts to reduce stormwater runoff and/or reduce impermeable surfaces.

The Ponaganset High School buildings are not connected to a municipal sewer system. All stormwater runoff is responsibly returned to the groundwater system through architecturally designed drainage systems.

11. Our school's drinking water comes from: () Municipal water source (x) Well on school property () Other:

12. Describe how the water source is protected from potential contaminants.

All well heads and water tanks are enclosed and locked with the pump systems located in fenced enclosed building areas. The ground areas in the vicinity of the well systems are blocked off from all vehicular traffic. The water from the wells is tested monthly by the Rhode Island Department of Health to ensure a high standard of water quality for our students and faculty.

13. Describe the program you have in place to control lead in drinking water.

Our water is tested for Lead, Copper, and other potential contaminants by the RI Department of Health to ensure quality. Lead free water fountains were installed during the renovation.

14. What percentage of the school grounds are devoted to ecologically beneficial uses?

Approximately 84% of the school grounds are devoted to ecologically beneficial uses. The entire site of the Ponaganset High School facility encompasses 140 acres and the school building facilities, parking areas, and athletic field are approximately 22 acres in size, leaving 138 acres of naturally forested areas interspersed with scenic foot trails used by students, faculty, and community members for athletic events and recreation. The school grounds include a pond that is used for canoeing and kayaking instruction with physical education students and science students in biology and other classes.

15. What percentage of solid waste is diverted from landfilling or incinerating due to reduction, recycling and/or composting? Complete all the calculations below to receive points.

A - Monthly garbage service in cubic yards (garbage dumpster size(s) x number of collections per month x percentage full when emptied or collected):

30 cubic yard compacting dumpster x 12 collections/year = **30 cubic yards trash per month**

Our trash dumpster is emptied when full.

B - Monthly recycling volume in cubic yards (recycling dumpster sizes(s) x number of collections per month x percentage full when emptied or collected):

30 cubic yard non-compacting dumpster x 9 collections/year (.75 collections per month) =
22.5 cubic yards recycled materials per month

Our recycling dumpster is emptied when full. Approximately 40% of the materials in our recycling dumpster are collected from the middle school. Taking this into account Ponaganset High School has **13.5 cubic yards** of recycled materials per month.

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):

_____ N/A _____

Recycling Rate = $(B + C) \div (A + B + C) \times 100$: $13.5/43.5 \times 100 = 31\%$

Monthly waste generated per person = $(A/\text{number of students and staff})$:

30 cubic yards trash/month/743 students and staff = 0.040 cubic yards per person/month

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

100% of our school's office/classroom paper is obtained from the district approved supplier WB Mason and is certified by the Forest Stewardship Council (FSC, www.fsc.org) as obtained from responsible sources. 100% of our school's toilet paper is produced from recycled paper.

17. Describe other measures taken to reduce solid waste and eliminate hazardous waste.

All mercury has long since been removed. No hazardous wastes are known to be produced by our school.

18. Which green cleaning custodial standard is used? GS-42

What percentage of all products is certified? 100%

What specific third party certified green cleaning product standard does your school use? GS-37

Alternative Transportation

19. What percentage of your students walk, bike, bus, or carpool (2 + student in the car) to/from school? (Note if your school does not use school buses)

Approximately 85% of our students ride school buses to and from school. Due to the rural nature of Ponaganset High School and long distances for the majority of students, very few students walk or bicycle to school. The majority of students who drive to school carpool with two or more students in the car.

How is this data calculated? (50 word max)

This was calculated using the number of students with parking passes, the total number of students in the school, and observations made in the student parking area.

20. Has your school implemented?

designated carpool parking stalls.

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.

[] Safe Pedestrian Routes to school or Safe Routes to School

21. Describe how your school transportation use is efficient and has reduced its environmental impact.

Buses serving Ponaganset High School are late model diesel vehicles that comply with strict anti-idling policies to decrease emissions and reduce student exposure to emissions. The buses are inspected twice a year to ensure they meet rigid requirements for both safety and emissions. Buses are also equipped with catalytic systems to reduce exhaust emissions.

To minimize the miles per day the buses are driven the bus routes are planned for maximum efficiency, middle school and high school students share the same buses, and local bus companies familiar with the area serve the school district. Buses are stored locally to minimize driving distances.

22. Describe any other efforts toward reducing environmental impact, focusing on innovative or unique practices and partnerships.

Major efforts towards reducing environmental impact took place during the 2009 renovation of Ponaganset High School. During the renovation process we partnered with Con Edison Solutions for the energy saving ESCO work and partnered with local architectural firm Aharonian and Associates for the energy efficient design of the building and implementation of technology to reducing environmental impact. This green building technology included daylight harvesting via lighting controls; skylight installations, energy efficient windows, energy efficient building lighting, construction of the Biomass facility, low VOC building materials, Building insulation, computerized HVAC system, and fresh air heat exchangers.

With the goal of combining academics with real-world applications for sustainability, student research has taken place on the feasibility of biodiesel blends for our school buses with the long term goal of using biodiesel blends to meet our transportation needs. Partnerships with Newport Biodiesel, Malloy Biofuels, and the Rhode Island Office of Energy Resources made the Coast to Coast Biodiesel Pickup Project possible. This 7,000 mile trip using essentially pure biodiesel successfully demonstrated the viability of biodiesel for practical applications.

Ponaganset High's recycling club is comprised by student volunteers and lead by science teacher Jane Bullock. Our recycling club collects bins of paper and plastic bottles from every classroom on a weekly basis keeping this material out the landfill to be reprocessed into useful products, saving resources and dollars in trash fees.

Pillar 2: Improve the health and wellness of students and staff

Environmental Health

1. Describe your school's Integrated Pest Management efforts, including IPM/green certifications earned, routine inspections, pest identification, monitoring, record-keeping, etc.:

Insect and rodent control is accomplished solely through the use of sticky traps, eliminating the use of pesticides or other harmful chemicals. Pest inspections are regularly scheduled on a monthly basis and are monitored through standardized record keeping procedures.

2. What is the volume of your annual pesticide use (gal/student/year)? Describe efforts to reduce use: *Pesticides are not used in Ponaganset High School.*

3. Which of the following practices does your school employ to minimize exposure to hazardous contaminants? Provide specific examples of actions taken for each checked practice.

Our school prohibits smoking on campus and in public school buses.

Our school has identified and properly removed sources of elemental mercury and prohibits its purchase and use in the school. _____

Our school uses fuel burning appliances and has taken steps to protect occupants from carbon monoxide (CO) _____

Our school does not have any fuel burning combustion appliances

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 has identified any wood playground or other structures that contain chromate copper arsenate and has taken steps to eliminate exposure.

4. Describe how your school controls and manages chemicals routinely used in the school to minimize student and staff exposure.

Ponaganset High School utilized an EPA program that was established to safely remove and dispose potentially hazardous chemicals that may have been stored in the Science Department Chemical Storage Area. Chemicals that are stored in this area are properly placed according to chemical properties found on the label and MSDS information. Acids and similar chemicals are properly stored in metal cabinets designed for specific chemical storage that are properly ventilated and labeled.

Science Department Chair Alicia Bailey is the school's Chemical Hygiene Officer and regularly monitors the storage of chemicals used by the Science Department.

5. Describe actions your school takes to prevent exposure to asthma triggers in and around the school.

As part of the computerized HVAC system, the school's Energy Recovery Ventilation Systems (ERV's) filter any particulate matter from the air to ensure healthy air quality for all students and faculty. The filters are changed quarterly to ensure maximum efficiency and air quality.

6. Describe actions your school takes to control moisture from leaks, condensation, and excess humidity and promptly cleanup mold or removes moldy materials when it is found.

During the renovation project an entire new membrane roof was installed to ensure a leak free and low moisture environment. In the event of any small leaks developing in such areas as science lab exhaust hoods etc. the leaks are promptly sealed and any discolored ceiling tiles are replaced to prevent the development of any mold.

7. Our school has installed local exhaust systems for major airborne contaminant sources.

Yes

Energy Recovery Ventilation (ERV) Systems were installed during the 2008 expansion and renovation of Ponaganset High School. The benefit of using energy recovery is the ability to meet the ASHRAE (American Society of Heating, Refrigeration, and Air-Conditioning Engineers) ventilation & energy standards, while improving indoor air quality and reducing total HVAC equipment capacity.

All Science labs are equipped with fume hoods that ensure healthy air quality during science activities.

8 Describe your school's practices for inspecting and maintaining the building's ventilation system and all unit ventilators to ensure they are clean and operating properly.

A regular maintenance schedule is in place for filter changes, lubrication, cleaning, and other work to ensure proper operation of the building's ventilation system. A computer control and monitoring system ensures the ventilation system is operating properly and efficiently.

9. 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.

All classrooms are equipped with computer controlled and monitored ventilation systems that monitor and adjust room temperature, percentage of outside air coming into the room. Carbon Dioxide sensors are installed in all the classrooms to ensure proper ventilation for the number of students in the room. The Carbon Dioxide sensors work with occupancy (motion) sensors to put temperature levels in standby mode to save energy that would otherwise be wasted heating an empty room.

10. Describe other steps your school takes to protect indoor environmental quality such as implementing EPA IAQ Tools for Schools and/or conducting other periodic, comprehensive inspections of the school facility to identify environmental health and safety issues and take corrective action.

Ponaganset High School has implemented the EPA IAQ Tools for Schools and has established an Indoor Air Quality Plan that was developed using the Rhode Island Department of Education Indoor Air Quality Plan as a template.

Nutrition and Fitness

11. Which practices does your school employ to promote nutrition, physical activity and overall school health? Provide specific examples of actions taken for each checked practice, focusing on innovative or unique practices and partnerships. (100 word max each or whatever you choose to make them!)

Our school participates in the USDA's Healthier US School Challenge. Level and year:

_____.

Our school participates in a Farm to School program to use local, fresh food. Sodexo sponsors this work.

Our school has an on-site food garden. This vegetable garden is run by students in our AG program.

Our school garden supplies food for our students in the cafeteria, a cooking or garden class or to the community. *School grown food has been utilized in our schools Food Tech cooking classes in our Family and Consumer Science pathway.*

Our students spent at least 120 minutes per week over the past year in school supervised physical education.

Our physical education classes run in semester class settings which average 240 minutes weekly which is equal to 120 minutes weekly over the course of the year.

At least 50% of our students' annual physical education takes place outdoors. _____

Health measures are integrated into assessments.

Health measures are routinely integrated into the assessments in the Health classes (taught by our PhysEd teachers) that are required for all students. The physical education department employs software based data systems to track physical fitness goals. The Presidential Physical Fitness Standards are addressed as well through routine assessments.

At least 50% of our students have participated in the EPA's Sunwise (or equivalent program). *At the elementary and middle schools, students participate in a "No Fry Friday Event" which is held on the Friday before Memorial Day. Students who wear a hat, sunglasses, SPF 15 sunscreen and a long sleeve t-shirt, receive a certificate from the EPA for being Sunwise.*

Parents are also made aware of the importance of Sun Protection. At the high school level, the dangers of tanning beds and sun protection are reinforced.

Prior to prom season, posters are displayed showing before and after pictures of sun damage along with up to date information regarding tanning beds. Information is also provided on the school website for parents to view.

R.I. Law imposes 2 provisions : 1.) "Minors in R.I. who want to tan indoors will no longer be able to without written consent from a licensed physician for UV radiation treatment .

2.) The minor's parent or guardian signs a written consent form, in the presence of an employee of the salon, for every second that the minor tans.

The consent form states : " I understand that the World Health Organization has classified the UV radiation used in tanning facilities as a Class 1 carcinogen, the same category as tobacco products . By exposing my child to UV radiation in this facility, the possibility of my child developing melanoma(skin cancer) will increase." This is on the high school web-site.

12. Describe the type of outdoor education, exercise and recreation available.

We are situated on 140 forested acres with a wide variety of opportunities for outdoor education, exercise, athletics, recreational walking, etc.. Our outdoor facilities include a renowned cross country course that winds through the native forest and is used annually for the statewide track meet. The facilities also include a newly refurbished track, tennis courts, soccer, football, and baseball fields as well as a pond that is used for canoeing and kayaking by PhysEd students. The physical education department curriculum also includes outdoor units on archery and the wide open field areas are used by both Science and STEM Academy students in classes ranging from Chemistry to Aerospace Engineering.

13. Describe any other efforts to improve nutrition and fitness, highlighting innovative or unique practices and partnerships.

We partner with our food provider Sodexo which focuses on healthy, locally grown produce. Ponaganset High School has a comprehensive Wellness Policy addressing the cornerstones of good health including proper nutrition through healthy food and beverages, cafeteria climate, and physical activity. (The entire 4 page Wellness Policy is available upon request.)

14. Does your school use a Coordinated School Health approach or other health-related initiatives to address overall school health issues? (x) Yes () No

If yes, describe the health-related initiatives or approaches used by the school:

Our school nurse has launched our “vaccinate before you graduate” initiative to improve overall student health and prepare students for post-secondary experiences.

School Based Flu Clinics are provided yearly, during school hours, at the high school for all students, staff and faculty. Evening flu clinics are also available at the middle and elementary schools for students and family members. Any outbreaks of communicable diseases are reported promptly to the RIDOH. Increased numbers of strep throat are also reported. For 2015-2016 school year, new rules and regulations, developed by the Rhode Island Department and Health, will increase vaccinations requirements at all grade levels. This will be communicated to parents prior to the school year, on the school web site , and at Freshman Orientation.

15. Does your school partner with any postsecondary institutions, businesses, nonprofit organizations, or community groups to support student health and/or safety? (x) Yes () No

If yes, describe these partnerships:

We partner with CAST (Citizens and Students Together) which broadly supports efforts to support pro-social activities that steer students away from drug use. Partnerships have also been formed with Anti-drunk driving groups who increase student awareness through presentations and student activities.

16. Does your school have a school nurse and/or a school-based health center? (x) Yes () No

A Certified School Nurse Teacher provides population- based health services in accordance with RIGL Chapter 16-21-9. Said services include no less than the following components :

Health examinations /screenings, health record keeping requirements, reporting and management of any school-based communicable , or occupational disease as directed as directed by a physician in accordance with the regulations.

Individualized Health Services for students and staff , first-aid and emergencies, we have written protocols ,and standing orders available in the event of injuries and acute illnesses including anaphylaxis. Annual in-service to school personnel on basic first-aid training, bloodborne pathogens, universal precautions and anaphylaxis. Food allergy management, there is proper posting within the school buildings in a conspicuous place re: peanut / tree nut allergies.

17. Describe your school’s efforts to support student mental health and school climate (e.g. anti-bullying programs, peer counseling, etc.):

Our school staff includes four guidance counselors, a half-time social worker, a half-time psychologist, and a drug and alcohol counselor. Together with administration, that team meets bi-monthly with the school nurse as a Student Support Team ensuring that the social and psychological needs of the students are met. Staff attends professional development that are relevant to this topic at Bradley and Butler Hospital. If students require hospitalization for mental health issues, multidisciplinary team meetings are held with the student’s case manager, from the facility, consenting parent/guardian and student. To implement, a plan that best meets the needs of the student and a smooth transition back to school. Our CAST (Citizens and Students Together) program supports the work of both Youth-to-Youth and STARS (Students Taking Action for Real Situations) which are organizations promoting healthy lifestyles and student leadership. STARS in particular supports activities through our advisory program which

focus upon improving the emotional environment of the school and includes anti-bullying and other programs.

Pillar 3: Effective Environmental and Sustainability Education

1. Which practices does your school employ to help ensure effective environmental and sustainability education? Provide specific examples of actions taken for each checked practice, highlighting innovative or unique practices and partnerships.

Our school has an environmental or sustainability literacy requirement.

While our school has not formalized an environmental or sustainability literacy requirement, students in many science classes including Biology (required for all students), AP Environmental, Alternative Energy and Sustainable Systems, STEM Academy classes such as Engineering for Energy Production and PLTW Principles of Engineering, and Academy of Agriculture & Natural Resources classes all have required reading in the areas of the environment and sustainability.

Environmental and sustainability concepts are integrated throughout the curriculum.

Environmental and sustainability concepts are taught in AP Environmental Science, with courses such as Food tech and AP Biology also addressing these concepts as part of their curriculum. Inherent in the course title, Alternative Energy and Sustainable Systems I and II covers a wide array of environmental and sustainability concepts including problematic areas such as climate change, air, land and water pollution, land use, reliance on limited fossil fuels and how to improve our environment and quality of life through technology including solar, wind, geothermal, energy efficiency, fuel cells, biodiesel, algae fuels, aviation biofuels (www.bioplane.us), etc.

To complement the theories of sustainability that students learn through the sciences, STEM Academy classes guide students through the design and fabrication of sustainable project prototypes, and stimulate a passion for continued education in the field of engineering.

Recently, our Academy of Agriculture & Natural Resources has gained status as a state CTE program by demonstrating excellence in the practice of educating students in the subject, and incorporates and instructs in the sustainability practices that occur throughout the agricultural industry.

Environmental and sustainability concepts are integrated into assessments.

A considerable number of major assessments in biology and environmental science require students to solve environmental problems based on real world data.

In our Agricultural program, most assessments within horticulture tie-in with four of the different practices for sustainability in the greenhouse industry.

Alternative Energy I and II offer a wide range of assessments to include research and presentations, hand-on labs involving solar, fuel cell, and biofuel technologies, and persuasive writing on relevant environmental topics.

Project-based assessments used by the STEM Academy include wind turbine blade design, solar collector efficiency challenges, projects in energy conversion and efficiency, and optimizing structures for a changing climate.

Students evidence high levels of proficiency in these assessments.

We do not formally track data on all types of assessments involving these concepts. At times these concepts are assessed through entries in a digital portfolio or through student selected senior research and exhibition projects. The horticulture classes have a major unit of instruction in sustainability which is assessed through presentation and final exam. Alternative Energy and STEM Academy students routinely incorporate renewable energy concepts into their senior papers and other public exhibitions.

Our AP Environmental Science AP Scores consistently exceed global averages.

[] Professional development in environmental and sustainability education are provided to all teachers. *Professional development opportunities are provided to instructors teaching in specific programs that support the areas of interest. Our AG instructors are both members of the RI and National Association of Agricultural Educations and are very involved with FFA (formerly Future Farmers of America). Our Alternative Energy instructor routinely attends and presents at Fuel Cell conferences, Sustainable Schools Summit, Rhode Island Environment and Energy Leaders conference and others. STEM Academy instructors participate in Project Lead The Way's summer training institutes for the PLTW classes that they teach, and for other classes keep active status as NCCER, OSHA, and S/P2 instructors.*

2. For schools serving grades 9-12, provide:

Percentage of last year's eligible graduates who completed the AP Environmental Science course during their high school career: ~2% Percentage scoring a 3 or higher: 90 % of the students enrolled in AP Environmental class passed the exam with a 3 or higher.

3. How does your school use sustainability and the environment as a context for learning science, technology, engineering and mathematics thinking skills and content knowledge?

We take advantage of our campus, which features a large expanse of forest with streams and a large pond, for observation and data collection in the sciences, and testing in the STEM subjects. We have a sustainable outdoor lab for Agriculture & Natural Resources, which features a composting facility and raised beds. We have two working greenhouses, each of which is equipped with hydroponic and aquaponic systems. We are in the process of constructing solar heat storage in our greenhouses to minimize use of oil heat. All the sustainability projects in the STEM Academy focus on the creation of new (or improved) technologies using the engineering design process, which relies on a strong foundation in the concepts of science and the language of mathematics.

4. How does your school use sustainability and the environment as a context for learning green technologies and career pathways?

Our AG curriculum is aligned to the National Agricultural Standards in Agriculture, Food Production, and Natural Resources (AFNR). The AFNR standards focus upon environmental sustainability in preparation for careers in food production, natural resource systems, environmental service systems, and agribusiness systems.

The Pathway to Engineering within the STEM Academy has received State CTE approval and sees many graduates of the program pursuing degrees in technology and engineering, several of them entering into the emergent field of 'green tech.'

5. Describe students' civic/community engagement projects integrating environment and sustainability topics.

Each year, a number of students from our AG-based intra-curricular Future Farmers of America (FFA) program participate in a locally grown banquet in which we raise our own chickens, lettuce, and tomatoes and take part in a dinner that is Rhode Island grown.

The STEM Academy offers extracurricular activities including a FIRST FRC team, and a TSA team. Both organizations focus on sustainability as a tenant at a national/global level, but the outreach that is encouraged by the organizations at a local level is what engages the community much more. Additionally, the STEM Academy is in the process of setting up a fabrication facility that will include several plastic-extrusion 3d printers. What will make this different from most fabrication labs is the inclusion of filament extruders that take stock thermoplastics and extrude them into useable filaments. By working with the school's recycling club, the lab will be able to do in situ recycling of HDPE into 3d printed projects. This plan, if sustainable, will be shared with the libraries in the regional district so that they can have their own maker spaces stocked by recycled materials.

6. Describe students' meaningful outdoor learning experiences at every grade level.

Agriculture classes are offered to students in every grade level and these classes consistently are outdoors or in our greenhouses for their learning in this area.

Students in Alternative Energy classes have participated in a ride-and-drive events with the Chevy Volt hosted by National Grid and the Chevy Fuel Cell Equinox hosted by GM.

Testing of atmospheric and aquatic vehicles in any of the STEM Academy classes that include such lessons occur outdoors on our campus.

7. Describe how outdoor learning is used to teach an array of subjects in context, engage the broader community, and develop civic skills.

We have students who use our senior exhibition project to further their outdoor learning. For example, one student is working with the RI Forestry Conservators and is actively involved in creating a sustainable forest plan to include planning and clearance. A student that just graduated, researched and then worked closely with the control of feral hog populations in Texas, reporting on all he learned in his senior presentation.

8. Describe your partnerships to help your school and other schools achieve in the 3 Pillars. Include both the scope and impact of these partnerships.

In science we partner with the Northern Conservation District in order to test well-water and broadly educate students in the Scituate Reservoir Watershed Educational Program. Perhaps the biggest partnership was the ESCO through ConEdison Solutions that funded the energy saving renovation features of the school. The financial mechanism of the ESCO enables the money saved through energy saving building features such as new windows, insulation, computerized HVAC, Biomass Heating, etc. to be used to pay back the cost of implementing the energy saving technology. This is a win-win situation that can be successfully used by other schools.

Project Lead the Way accredited schools are required to setup a partnership team to ensure the efficacy of the program, and make the connections within industry and education to ensure the continued growth and development of the program.

Numerous other partnerships with corporations, organizations, and members of the school community have been formed to achieve Ponaganset High School's renewable energy projects.

9. Describe any other ways that your school integrates core environment, sustainability, STEM, green technology and civics into curricula to provide effective environmental and sustainability education, highlighting on innovative or unique practices and partnerships.

Ponaganset's STEM Academy organizes a Women in STEM conference that exposes girls from the middle and high schools to female role models in the STEM world. This conference was designed to encourage young women to pursue STEM fields in their education and careers later on, so as to begin counteracting the chronic deficit of women in STEM fields that is observed at present.

10. Submit photos (with appropriate permissions) that illustrate the green practices undertaken at the school.





