

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. The Department of Defense Education Activity (DoDEA) is not subject to the jurisdiction of OCR. The nominated DoDEA schools, however, are subject to and in compliance with statutory and regulatory requirements to comply with Federal civil rights laws.
4. OCR has not issued a violation letter of findings to the public school district concluding that the nominated public school or the public school district as a whole has violated one or more of the civil rights statutes. A violation letter of findings will not be considered outstanding if OCR has accepted a corrective action plan to remedy the violation.
5. The U.S. Department of Justice does not have a pending suit alleging that the public school or the public school district as a whole has violated one or more of the civil rights statutes or the Constitution's equal protection clause.
6. There are no findings of violations of the Individuals with Disabilities Education Act in a U.S. Department of Education monitoring report that apply to the public school or public school district in question; or if there are such findings, the state or public school district has corrected, or agreed to correct, the findings.
7. The school meets all applicable federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

U.S. Department of Education Green Ribbon Schools 2015-2018

Public Charter Title I Magnet Private Independent Rural

Name of Principal: **Mr. Paul Nigro**

Official School Name: **Holland Brook School**

Official School Name Mailing Address: **PO Box 1500, 52 Readington Road, Whitehouse Station, NJ 08889**

County: **Hunterdon** State School Code Number *: **4350**

Telephone: **908 823 0454** Fax: **908 349 3021**

Web site/URL: www.readington.k12.nj.us/hollandbrook E-mail: pnigro@readington.k12.nj.us

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 application and certify that to the best of my knowledge all information is accurate.

Date: **1/23/19**

Name of Superintendent: **Dr. Jonathon Hart**

District Name: **Readington Township Public Schools**

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 application and certify to the best of my knowledge that the school meets the provisions above.

(Signature)
(Superintendent's Signature)

Date: 1/23/19

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: **New Jersey Department of Education**

Name of Nominating Authority: **Mr. Bernard E. Piaia, Jr.**

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

Bernard E. Piaia Jr.

Date: **February 14, 2019**

(Nominating Authority's Signature)

SUMMARY AND DOCUMENTATION OF NOMINEE'S ACHIEVEMENTS

Provide a coherent summary 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. Then, include concrete examples for work in every Pillar and Element. Only schools that document progress in every Pillar and Element can be considered for this award.

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: March 31, 2018

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.

School Contact Information

School Name: [Holland Brook](#)

District: [Readington](#)

Street Address: [52 Readington Road](#)

City: [Whitehouse Station](#)

State: [New Jersey](#)

Zip: [08889](#)

Website: <https://www.readington.k12.nj.us/hollandbrook>

Facebook page: <https://www.facebook.com/readingtonschools/>

Principal Name: [Paul Nigro](#)

Principal Email Address: pnigro@readington.k12.nj.us Phone Number: [908 823 0454](#)

Lead Applicant Name (if different): [Joyce McGibbon](#)

Lead Applicant Email: jmcgibbon@readington.k12.nj.us Phone Number: [908 823 0454 ext 2013](#)

<p>Level</p> <p><input type="checkbox"/> Early Learning Center</p> <p><input checked="" type="checkbox"/> Elementary (PK - 5 or 6)</p> <p><input type="checkbox"/> K - 8</p> <p><input type="checkbox"/> Middle (6 - 8 or 9)</p> <p><input type="checkbox"/> High (9 or 10 - 12)</p>	<p>School Type</p> <p><input checked="" type="checkbox"/> Public</p> <p><input type="checkbox"/> Private/Independent</p> <p><input type="checkbox"/> Charter</p>	<p>How would you describe your school?</p> <p><input type="checkbox"/> Urban</p> <p><input checked="" type="checkbox"/> Suburban</p> <p><input type="checkbox"/> Rural</p>	<p>District Name</p> <p>Readington</p> <p><input type="checkbox"/> Largest 50 Districts in the nation?</p> <hr/> <p>Total Enrolled:</p> <p>319</p>
<p>Does your school serve 40% or more students from disadvantaged households?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>% receiving FRPL: 0.06%</p> <p>% limited English proficient: 0.2 %</p> <p>Data from 2018/19 academic year to date</p>		<p>Graduation rate:</p> <p>N/A</p> <p>Attendance rate:</p> <p>99.804%</p>

SUMMARY NARRATIVE: Provide an 800 word maximum narrative for publication 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. (See [examples](#) from prior year)

[Readington Township schools wholeheartedly embrace sustainability, from the BOE and superintendent to our youngest students. Our district’s strategic plan includes reducing energy use, developing environmentally responsible facilities, enhancing sustainability education, adding sustainability electives, recycling and composting at every school, and all schools earning Sustainable Jersey certification. Our district not only achieved those goals but exceeded them, including installing solar panels, and our accomplishments were featured in a local news channel PBS39 television news report. In support of our green initiatives, our BOE hired an Energy Efficiency Coordinator who has increased energy consumption awareness, tracked energy consumption and reduced usage dramatically. She provides sustainability lessons to students, PD to teachers, and advice to principals, and the larger community, how to incorporate energy savings into daily lives.](#)

[While strong leadership and a supportive BOE are critical for sustainability progress, ongoing success requires the buy-in of staff and students. HBS students actively promoting environmentally friendly behaviors throughout our school community. Student leaders assess classrooms on walkthroughs to see if students and staff are conserving energy by turning off lights, electronic devices, and closing blinds for temperature regulation. Providing feedback to the staff goes a long way to modify teacher behavior and empowers students. Students in the environmental club raise](#)

awareness about the importance of recycling, how, what, and where to recycle, create bird feeders and organizers through upcycling, and initiated non-mandated recycling programs with TerraCycle and Crayola Colorcycle. Upcycling and sustainability are infused into our Innovation and Design and Discover Lab classes, from creating race cars from 100% recycled materials to taking apart old electronics to learn how they work, then upcycling components into new challenges. News Crew, our student run news show, incorporates sustainability features in its monthly news shows. Students have embraced our new chromebook 1:1 initiative and are enjoying using Google suites to receive, complete, and submit assignments electronically, which along with switching to electronic newsletters and report cards, has dramatically reduced paper use.

Student and staff health, safety, nutrition and fitness are enhanced through our multiple partnerships such as Healthy Schools, Healthy People for handwashing and hygiene, The Weller Health Education Center for sex education, Hunterdon Medical Centre for the Sunwise program, NJ Bar Foundation for professional development workshops related to HIB, MyFriendRyan to promote understanding of autism, and physical fitness through partnerships with Girls on the Run, Let me Run, Firefly Tennis and First Tee Golf. Our turkey trot 2-mile fun run and full day inflatables field day are a beloved part of our schools fit and fun traditions. Food-centric birthday and holiday celebrations have been eliminated, and children are encouraged to stay hydrated with refillable water bottles and our water bottle filling station. Student recess time has doubled since last year, and all teachers incorporate brain breaks such as GoNoodle into their days, a bonus to both physical and mental health. Our SEL initiative, HBS Bobcats ROCK (Respectful, outstanding, caring kids) is providing the students with a yearlong program focusing on self-awareness, self-management, responsible decision making, relationship skills, and social awareness. We have developed a school song, implemented spirit days, and buddy class activities which has truly enhanced school spirit.

Student learning is not restricted to the classroom. Eighty percent of our grounds is green space including grassland, forest, native or regionally appropriate trees and landscaping, solar field, outdoor running track through the trees, naturally seeded retention basin, preserved meadow, and outdoor classroom. Our outdoor classroom and rural location lends itself to nature walks whether for brain breaks or connecting classroom lessons. Fourth grade, in partnership with Raritan Headwaters, visit the river to learn about the interconnectedness of ecosystems by analyzing the surrounding environment, water quality, and biodiversity of wildlife present in the water. Our involvement led to us becoming a river friendly, certified school. Recess and PE classes are held outside when weather permits, as are Girls on the Run and Let me Run after school fitness clubs.

Student classroom learning about our environment and the importance of sustainability initiatives are infused throughout the curriculum from obvious connections about ecosystems, global warming, and plants in science classes, to learning to read and draw graphs in math using climate change data, to the problems caused by deforestation in music class, to engineering houses with modifications to withstand natural disasters, and planning a redesign of our town to reduce environmental impact and reduce reliance on cars. Science units involving weather are enhanced by using data from our school weather station, which is posted on our website daily, along with local air quality. Students also learn through assemblies focused on sustainability such as the presentation by our solar provider Ameresco. At Holland Brook we are proud of the positive and sustainable changes that we have made across all three pillars and look forward to continued growth as a green school.

SCHOOL PROFILE: GREEN SCHOOL PROGRAM AND AWARDS (Cross-Cutting Question)

1. Has your school participated in a local, state, or national program, which asks you to benchmark progress in some fashion in any or all of the Pillars? Yes No If yes, please explain what program(s) and what level you are currently at, and state the years you have been involved in these programs.

Our school established a benchmark in 2012 using Energy Star Portfolio Manager and has continued to maintain our profile ever since. We participate in the Eco-Schools USA program, River Friendly Schools program, and Sustainable Jersey for Schools.

2. Has your school, staff or student body received any awards for facilities, health or environment? Yes No Award(s) and year(s) River Friendly Stream certification 2014, Sustainable Jersey for Schools bronze certification 2015 (Bronze) and 2018 (High Bronze)

3. Has your school identified or created a place for teachers to go to share lessons on Sustainability? Yes No

At the district level, we have district Teacher Academy sessions where district staff learn about incorporating sustainability lessons into their classes. In the summer of 2018 we introduced Learning Lab from the USGBC to a pilot

group of teachers and hope to implement this new platform this year. On a building level, we have a Google drive folder where teachers share sustainability lessons. For ease of use, we have a Google sheet where lessons can be sorted by grade, academic subject area, area of sustainability focus, etc. All teachers have access through Google drive, and links and additional lesson materials can be accessed through the Google sheet.

4. Has your School Board adopted a Green Strategic Plan or sustainability policy? Yes No

Our board adopted a District Sustainability Policy (2017), Idle-Free School Zones Policy (2015), Green and Healthy Schools Cleaning Policy (2015), and Energy Conservation Policy (2013). The district strategic plan also includes a green component.

5. Has your school created a Green Team? Yes No If yes, list team members and their roles. Joyce McGibbon, Gifted and Talented; April Berkin, librarian; Linda Kovacs, technology; Linda Riess, fifth grade teacher; Nancy Kelly, Nurse; Carrie Sivo, physical education; Meryl Vance, fourth grade teacher. Each member was chosen from a different position in the school to make our committee diverse.

6. Has your school seen a cost savings from green initiatives? Yes No If yes, input **cost savings** data:

	Electric Energy Consumption (kwh)	Natural Gas or Fuel Oil Consumption (therms)	Electric Utility Costs (\$)	Natural Gas Utility Costs (\$)	Total Utility Costs (\$)	Annual Savings (\$)	% Reduction from Baseline Year
FY14-15	1343146	94477	160982	69634	230616	Baseline	Baseline
FY15-16	1230316	72575	148620	51586	200206	30410	13%
FY16-17	1147740	46560*	151591	39063	160654	39962	17%
FY17-18	1183117**	58125	165590**	45521	211111	19505	8%**

* Malfunctioning natural gas meter replaced October 2017 made readings artificially low for several months

** Billing discrepancies from JCP&L when new solar panels came online in Feb resulted in no solar credit until June so numbers are artificially high for 5 months. Grid electricity usage for 17-18 is 859154 kWh and cost is \$143,564, solar is 323,963 kWh and \$22,026.

PILLAR I: REDUCED ENVIRONMENTAL IMPACT

Element 1A: Reduced/eliminated greenhouse gas (GHG) emissions. Use Portfolio Manager format if possible

7. Can your school document a reduction in **Greenhouse Gas emissions**? Yes or No Evidence in table below. Data obtained from district utility bills, as reported by Jodi Bettermann, district Energy Efficiency Coordinator.

	Electric Energy Consumption (kwh)	Natural Gas Consumption (therms)	Fuel Oil Consumption (gallons)	CO2 from Electric 1.52 lbs/kwh	CO2 from Natural Gas 11.7lb/therm	Carbon Dioxide from Fuel Oil 26.033 lbs/gal	Total Staff & Students	MT eCO2 /person	% Decrease from prior year
FY14-15	1343146	94477	0	2041582	1105381	0	452	6.96	baseline
FY15-16	1230316	72575	0	1870080	849128	0	449	6.06	13%
FY16-17	1147740	46560*	0	1744565	544752	0	437	5.24	13%

FY17-18	1183117 **	58125	0	1798338	680063	0	400	6.20	-18%
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* Malfunctioning natural gas meter replaced October 2017 made readings artificially low for several months

** Billing discrepancies from JCP&L when new solar panels came online in Feb resulted in no solar credit until June so usage is artificially high for 5 months. Additionally, student population decreased but entire building still in use amplified the number.

8. Has your school conducted an energy audit of its facilities? (e.g. LGEA, Eco-Schools Energy Audit) Yes XX No ___

Percent reduction: 30% Unit used (kBTU/sq ft or kBTU/student): kBTU/sqft Time period: 07/2017 to 06/2018

9. What is your EPA ENERGY STAR SCORE: 52 YEAR: 6/2018 Has your school received or met the requirements for EPA ENERGY STAR certification (score of 75 or above) Yes ___ No XX

10. Percentage of school's energy is obtained from on-site renewable energy generation: 64% projected Type solar

Purchased renewable energy: 21% Type solar RPS through ACES electricity contract

Participation in USDA Fuel for Schools, DOE Wind for Schools or other federal or state school energy programs: (Ex. ACES) Yes XX No ___ If yes, what programs? ACES Plus

11. Has your school reduced its total non-transportation energy use from an initial baseline? Yes XX No ___

How did you document this reduction? EnergyManager tracking software, Portfolio Manager

	Electric Energy Consumption (kwh)	Natural Gas Consumption (therms)	Fuel Oil Consumption (gallons)	Total kBtu	kBTU/sq.ft.	% Reduction From Baseline
FY14-15	1343146	94477	0	14030514	154.4	Baseline
FY15-16	1230316	72575	0	11455338	126.1	18%
FY16-17	1147740	46560*	0	8572089	94.3	39%
FY17-18	1183117**	58125	0	9849295	108.4	30%

* Malfunctioning natural gas meter replaced October 2017 made readings artificially low for several months

** Billing discrepancies from JCP&L when new solar panels came online in Feb resulted in no solar credit until June so usage is artificially high for 5 months.

12. What year was school originally constructed? 1999 Total building area (sq.ft) 90,869

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

For new building(s): Is building LEED Certified? Yes ___ No ___ level: ___ Total constructed area: ___

For renovated building(s): Is building LEED Certified? Yes ___ No ___ level: ___ Total renovated area: ___

Other green building standard used? ___ (CHPS, CHPS Operations Report Card, Green Globes, other)

Element 1B: Improved water quality, efficiency, and conservation

Water and Grounds

14. Can you demonstrate a reduction in your school's total water consumption (measured in gal/square foot) from an initial baseline? Yes ___ No XX If yes, please complete the table below. If no, please explain. (max 50 words)

We saw a reduction in water usage from the baseline year in 2015-16 only. The building is heavily used year-round as we host day camps and extended school year sessions at the school during the summer months. The Facility Manager indicated that there were no major leaks reported nor was there an equipment/facility change that would contribute to the increase. The Energy Efficiency Coordinator looked deeper into the data and found no trends in water usage that would explain the increase. Because water is sourced from a well on site, there is no utility or bill to use for verifying the readings. Learning this information, we are taking more frequent readings to better understand times of increased usage, the custodian will more closely watch for water running or leaking in the building, and we will evaluate replacement of the water meter which is several years old.

	Water Consumption (gallons)	Total Occupants	Gallons Per Occupant	% Reduction from FY 2014
FY '14-'15	527833	477	1107	Baseline
FY '15-'16	471633	474	995	10%
FY '16-'17	522533	462	1131	-2%
FY '17-'18	600423	425	1413	-28%

Do you include after-hour activities in your calculations? (adult sport leagues & education, scouting, community events, etc.?) Yes **XX** No ___ How was reduction documented? (i.e. Energy Star Portfolio Manager, utility bills) **Manual water readings by Facilities and tracked in Energy Manager software**

15. Describe any strategies you use to discourage single-use beverage containers on school property and assure the recycling of those containers if/when purchased and used at athletic locations, or other outdoor events. (Ex. Hydration Stations, bottle refilling fountains) (50-words max) **A water bottle filling station has dramatically increased the use of refillable water bottles. Children are actively encouraged to use it, rather than single-use bottles, through classroom education, posters, bulletin-boards, and promotion/education by our student led news show. A hydration station for refilling water bottles on Field day avoids selling single-use bottles. Recycling bins are located throughout the building, at all extracurricular events, and are prominently located to maximize recycling.**

16. What percentage of your landscaping is considered water-efficient and/or regionally appropriate? **100%** What types of plants are used and where are they located? Have you preserved any areas with native vegetation with minimal disturbance? (50-words max) **All plantings are naturalized and regionally appropriate. Many trees are native including eastern white pine, eastern red cedar, sugar maple, and northern catalpa. We also have Norway spruce and willow oaks. Landscaping includes boxwoods and fern grass, chosen for hardiness, low maintenance, and drought tolerance. A running trail was developed through our forested area while maintaining natural vegetation.**

17. How have you incorporated **native plants** into your landscaping? (50-words max) **Many native trees populate our school grounds (see Q16 above) with a new annual addition for Arbor Day. Shade trees (maple) were added to our outdoor classroom. Several trees were removed for our solar field installation, so a meadow area was planted providing an appropriate rest stop for migrating birds. A new water retention basin has been left to evolve from natural seed dispersal from surrounding flora.**

18. Describe alternate Non-potable water sources used for irrigation (e.g. roof or parking lot run-off). (50-words max) **We don't need alternate water sources since plantings were purposely selected to be self-sustaining, ensuring no irrigation is required. Many schools utilize rain-barrels to ensure the utilization of locally collected water for irrigation.**

19. Describe efforts to reduce stormwater runoff or reduce impervious pavement (e.g. rain gardens, bio swales, storm water basins). (50-words max) **Storm water run-off and roof drainage is collected in a retention basin on school property. The collected water is released slowly to reduce stress on drainage systems and is also used by native vegetation and trees. Outdoor recess area is grassed, field, and/or wood chip coverage to maximize natural drainage.**

20a. Our school's drinking water comes from: () Municipal water source (**X**) Well on school property (AKA a non-transient non-community water system) () Other:

If well on school property, school complies with all monitoring requirements? Yes **XX** No ___

If well on school property, drinking water meets all applicable standards? Yes **XX** No ___

Have all drinking water violations been corrected, if applicable? Yes **XX** No ___

21. Describe how the water supply for your school is protected from potential contamination. (Ex. Backflow preventers) (50-words max) **Backflow preventers are installed on boilers and hot water systems preventing contaminants from reentering the domestic water system used for drinking and food preparation.**

22. Describe the program you have in place to control lead in drinking water (e.g., pipe flushing, old plumbing solder). NJDEP Lead in Drinking Water (<http://www.nj.gov/dep/watersupply/dwc-lead-public.html>) (50-words max) **Drinking and food prep water supplies are routinely tested for lead and copper contamination. Periodic pipe flushing is completed after extended non-use of the building. Repairs to plumbing systems are completed using non-lead certified products.**

23. Describe how your school's site grading, irrigation system and schedule is appropriate for your climate, soil conditions, and plant materials for water conservation and/or improved storm water management. (50-word max) Storm water run-off and roof drainage is collected in a retention basin on school property. The collected water is released slowly to reduce stress on drainage systems and is also used by native vegetation. We do not use irrigation systems as plantings were purposely selected to be native and self-sustaining.

24. What percentage of school grounds are green space? (ex. Green roof, rain gardens, native plants, solar panels, fish farms, raised beds, living walls, wetlands/marsh, forest, grassland, etc.) 80% and list items (50 word max) Our property is mostly grasslands and forest. A preserved meadow area was planted to reestablish habitats impacted by the installation of our solar array last year. We have installed an outdoor classroom and a ¼ mile track was constructed through the woods to enhance outdoor exercise while maintaining established trees.

Element 1C: Reduce waste production – Waste/Hazardous Waste

25a. What percentage of solid waste (including food service waste) is diverted from landfills or incinerators 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): 72 cubic yards

B - Monthly recycling volume in cubic yards (recycling dumpster sizes(s) x number of collections per month x percentage full when emptied or collected): 18 cubic yards

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): 2 cubic yards

Recycling Rate = $((B + C) \div (A + B + C) \times 100)$: 22%

Monthly waste generated per person = $(A/\text{number of students and staff})$: 0.19 cubic yards

25b. Is school lunch waste composted on-site? Yes No Percent _____

25c. Do you have a zero-waste goal? Yes No Describe (50 words max)

26. What percentage of your school's total office/classroom paper content contains at least 30% post-consumer material, or fiber from forests certified as responsibly managed and/or chlorine-free? 100% of our printer/copier paper is FSC certified (FSC Co10014 Responsible) Since most assignments are now given, completed, and handed in digitally, the use of even this FSC certified paper is much less than in the past.

27. Do you include after-hour activities in your garbage reduction calculations? (adult sport leagues, adult education, scouting, other community events etc.?) Yes XX No _____

28. Describe how you have reduced your paper consumption, and how you measured that reduction or other uses you created for the materials (e.g. working and reviewing online, white boards). (50-word max) Our new 1:1 chromebook initiative allows assignments to be shared and work submitted electronically, drastically reducing printing/copying. The impact on paper use is being tracked during this pilot year. Printing by students is very limited and actively discouraged, and we have begun the process of eliminating teacher classroom printers and going to central copier printing, with combinations to limit the amount of copies per month. The preliminary preparation work has been implemented and the proposal has gone to BOE for evaluation. Once approved, this process will be implemented school wide, with the aim of starting for 2019/20 school year.

29. List the types and amounts of hazardous waste generated at your school:

Flammable liquids	Corrosive liquids	Toxics	Mercury	Fluorescent bulbs	Other:
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How is this calculated? Fluorescent bulbs containing mercury are collected and inventoried How is hazardous waste disposal tracked? Chain of custody documents are created by a recycling company which track hazardous materials from collection to disposal. Documents are kept in the districts central file

30a. Describe other measures taken to reduce or eliminate solid waste and hazardous waste (on-site composting etc.). (ex. Switching to re-usable cafeteria trays, silverware, etc.) (100-word max) Recycling bins are present in every

classroom and recycling is expected and actively encouraged. We are active participants in nonstandard recycling programs including the Crayola Color Cycle (recycling markers), and Terracycle to recycle juice pouches and Little Bite wrappers. All ink cartridges are recycled via manufacturer's return/recycle program. In the cafeteria, the use of reusable trays and composting of food waste greatly reduces solid waste. Children are responsible for sorting their trash and placing solid waste, recycling, and composting in correct bins. Composting is led by fifth grade students during their living systems unit of study in science.

30b. Describe how electronics are handled at the end of their useful life. (TV, computers, toner, etc.) (50 word max)

Total pounds of electronics discarded as hazardous waste? 0 Total weight of material reused? Not weighed

Was any donated? Y XX N___ (E-CYCLE: www.nj.gov/dep/dshw/ewaste/index.html EPEAT: www.epeat.net/)

(E-CYCLE NJ: <http://www.nj.gov/dep/dshw/ewaste/index.html> EPEAT: <http://www.epeat.net/>) As computers from upper grades are replaced due to age, many are reimaged and repurposed for the younger grades to increase availability of technology for all students. Electronics that have reached the end of useful life for our district are put out to bid. The winning bidder removes all the items from the trailer and obtains ownership for reuse, parts, or upcycling. Our phone system was updated this year, resulting in the replacement of all classroom phones (approximately 50 phones). These phones were upcycled through the Discover Lab where children used them in the Take-it-Apart table. Students dismantled the phones to investigate the components that make up the phone and figure out how they work. All removable components were then sorted and upcycled for use in other challenges and projects. Based on the success of this scheme, it was then extended to include laptops, printers, etc.

31. Which green cleaning custodial standard is used? Green Seal Standards

What percentage of products are certified? 80%

What third party certified green cleaning product standard does your school use? Green Seal, DFE Defined for the environment.

Describe the measures your school has taken to use only green cleaning products: District policies have been adopted, to increase procurement and use of green cleaning products. Peroxide based cleaners have replaced more hazardous chemicals previously used by custodians for daily cleaning. Cleaning chemicals, deodorizers, and other cleaning products brought in from home by staff, parents, etc are prohibited inside the building.

32. If your school has a nurse's office, how does the nurse track regulated medical waste? Describe the [tools or mechanisms](#) used to track this waste. Indicate (X) if you have the following:

- X School has a Generator ID number, unless exempted; Account #0088789, Sic Code 8211
- X School manages the regulated medical waste on-site properly? (Use the proper containers, properly segregate the regulated medical waste, and properly store the containers)
- X School uses a licensed and registered regulated medical waste transporter, unless exempted?
- X School ships the regulated medical waste to a facility authorized to accept the regulated medical waste?
- X School completes the proper paperwork to document the shipment and maintain records for 3 years?
- X School files the generator annual report, unless exempted?

The district is a category 1 licensed medical waste generator. Our school's regulated medical waste consists of sharps that are generated when treating diabetic students (lancets, insulin needles) and children with severe allergies (EpiPens) as well as the conducting of TB testing for new employees (TB syringes). Sharps are placed in Stericycle Needle Drop container, tracked and sent via the Sharps Disposal by Mail System to the disposal facility.

33. Is a Hazardous Waste Policy for storage, management and disposal of chemicals in laboratories and other areas with hazardous waste, in place and actively enforced? Yes XX (District Policy 7420-Hygienic Management) No ___

34. Do you have Underground Storage Tanks located at your School?

- XX None

35. Is your school compliant with the New Jersey Department of Environmental Protection's (DEP) Air Quality Permit requirement? (Air permits required for boilers, emergency generators, space heaters and hot water heaters that have a maximum rated heat input of 1 million BTU/Hr or greater, to the burning chamber. Schools might require an air permit

for certain woodshop operations (See what can be [permitted](#).) Yes No List Permits: permit # GEN130001-(GP-017)Boilers<5MMBTU/HR

Element 1D: Use of Alternative Transportation

36. What percentage of students walk/bike/skateboard, ride a school bus/use public transportation, or carpool (2+ students per car) to/from school? (Note if your school does not use school buses). How were these percentages collected and calculated? (50-word max) 100% of children are assigned bus transportation due to our rural location, 48 square mile service area, and absence of sidewalks. Of 319 students, none walk (not safe/feasible), approximately 30 (just under 10%) are regular parent drop-off/pick-up, about 10 (33% of driven students) carpool. This data was collected by staff performing drop off/pick up duty and through office records of parent sign-outs.

37. Indicate (X) if you have implemented the following. Descriptions up to 50 words may be added for each item.

- A well-publicized no idling policy that applies to all vehicles (including school buses, cars and delivery trucks) No idling policies are clearly displayed in prominent positions. We provide supervised drop-off for students enabling parents to pull up, drop off, and go. This speeds up drop off times, which in combination with staff regulated traffic flow, minimizes forced idling by reducing time waiting in line, for a parking spot, etc
- A policy that encourages walking and/or bicycling to school and promotes alternative transportation As per 37 above, there are no safe routes for children to walk or cycle to school due to our rural location, large service area, and absence of sidewalks.
- Vehicle loading/unloading areas are at least 25 feet from building air intakes, doors, and windows
- Walk and Bike to School Days As per 37 above, there are no safe routes for children to walk or cycle to school due to our rural location, large service area, and absence of sidewalks.
- A Walking School Bus program As per 37 above, there are no safe routes for children to walk or cycle to school due to our rural location, large service area, and absence of sidewalks.
- Secure bicycle storage (such as bicycle lockers, racks, or rooms) is provided to encourage bicycling to school As per 37 above, there are no safe routes for children to walk or cycle to school due to our rural location, large service area, and absence of sidewalks.
- Electric vehicle charging stations

39. If your school has only bus transportation, describe how your transportation is efficient and has reduced its environmental impact (more efficient bus routes, diesel retrofits, biodiesel fuel, electric vehicles). (50-word max) Bus routes changed from a 3-tier to 2-tier system resulting in improved efficiency, reduced fuel usage, reduced emissions, and reduced wear and tear on vehicles. The consolidation of routes translates into yearly savings of nearly 8,000 gallons of fuel, and reduced mileage by nearly 300 miles per day. The district is currently investigating the possibility of using propane fueled buses to further reduce environmental impact. If approved, the plan would be to replace current buses with propane fueled, once they reached the end of their useful life.

Summary Question for Pillar 1: Describe any other innovative practices and partnerships for reducing environmental impact. (100-word max) In partnership with Class 5 Energy's Schools for Energy Efficiency (SEE) program, we have greatly reduced district wide energy use. SEE has netted improvements in facility operations, energy conservation policies, and modified staff and student behavior. Student leadership club monitors the building and check teachers have been responsible in switching off lights, shutting down computers, and closing shades to conserve heat. Students collect data, leave compliment stickers for compliance, and areas for improvement stickers to provide guidance when necessary. Energy savings are shared with students, staff, and families through our Energy Efficiency website. It is empowering to students and helpful to staff in being more cognizant of energy efficiency.

PILLAR 2: IMPROVE THE HEALTH AND WELLNESS OF STUDENTS AND STAFF

Element 2A: Integrated School Environmental Health program

Environmental Health

1. Has your school conducted any "Occupant Survey" with teachers and students? If so, please state the date(s) and over results of the survey. ([CHPS Occupant Survey](#)) Yes, Indoor Air Quality occupant survey (EPA's Tools for Schools)

2. Do you have an Operations & Maintenance Policy for your building? Yes (District Policy 7410)

3. Does your school have an Integrated Pest Management plan? Yes No Date last updated: 9/2017

4. Indicate (X) which of the following practices your school employs to minimize exposure to hazardous contaminants. Provide specific examples of actions taken for each checked practice.

- School conducts both indoor (structural) and outdoor (turf and ornamental) IPM to reduce student exposure to chemical pesticides. The school has a full scale IPM program that complies with the IPM in Schools Act. Monthly monitoring is performed and records are kept. Pest issues are handled promptly utilizing low impact methods such as proper cleaning techniques, and using caulking and weather stripping to reduce pest entrance points.
- School reduces or does not use fertilizer on our property We do not use fertilizers on school grounds
- School prohibits smoking on campus and in public school buses District policy 7434-Smoking in school
- School has identified and properly removed sources of elemental mercury and prohibits its purchase and use in the school. With the exception of fluorescent bulbs which are recycled as hazardous waste.
- School uses fuel burning appliances and has taken steps to protect occupants from carbon monoxide (CO)
- School does not have any fuel burning combustion appliances (e.g. boilers, generators, hot water heaters)
- School has tested all frequently occupied rooms in contact with the ground, and first floor rooms above basement spaces that are not frequently occupied for radon gas and has fixed and retested rooms with levels that tested at or above 4 pCi/L . [NJ Recommends School Radon Testing](#) Yes No
- School built with radon resistant construction features tested to confirm levels below 4 pCi/L. Yes No Yes, and building has passive radon venting.
- Our school has identified any wood playground or other structures that contain chromate copper arsenate and has taken steps to eliminate exposure to this pesticide/wood sealing preservative. Avoid the issue by not having wooden playground equipment, all metal and plastic.

5. Describe how your school controls and manages chemicals routinely used in the school, as well as construction or cleaning activity that produces odors or dust, to minimize student and staff exposure. (100-word max) Holland Brook School manages chemicals following the NJ Hazard Communication Standard. Yearly surveys are conducted to identify chemicals present and to ensure that containers are labeled properly. Safety Data Sheets are filed and kept in the main office. All new staff members receive Right to Know Training and refresher training is provided to employees who routinely work with chemicals. Normal daily cleaning is performed in the evening when the building is unoccupied. Construction and intense cleaning is scheduled during summer breaks to reduce exposure of staff and students to dust, and/or odors.

6. Describe actions your school takes to prevent exposure to asthma triggers in and around the school. (100-word max) An Indoor Air Quality plan is in place to ensure that HVAC equipment is maintained, and filters are clean to promote good air quality inside the building. Water intrusion or plumbing leaks are taken care of asap to inhibit mold and mildew. Green cleaning chemicals and practices are used to promote good air quality and limit toxins that could be asthma triggers. Staff, parents, etc are prohibited from bringing in cleaning chemicals, deodorizers, and other perfume products from home. Mats are placed at every door and children are encouraged to stamp off shoes and wash hands after outdoor activities to reduce the transfer of outdoor allergens.

Is your school signed up to receive air quality alerts through [Enviroflash](#) which issues notifications of days when poor air quality is forecasted to occur? [Learn more](#) Yes No Yes, there is an app on the HBS home webpage that shows daily outdoor air quality. In addition to our website, this information is shared with our community by flying colored flags that correspond to air quality rankings.

Has your school developed a plan for implementation to modify activities to protect the health of students and teachers when poor air quality is forecasted? Yes No Outdoor activities are held daily, weather and air quality permitting. When air quality is deemed unhealthy (or higher) decisions are made, in partnership with the school nurse, about the appropriateness of outdoor activities.

Have you provided [brochures](#) to students, teachers and parents to educate them about air quality and steps they can take to protect their health and decrease their contribution to ozone pollution? Yes No Yes, there is information available on the facilities page on the district website about air quality, and asthma.

8. Describe actions your school takes to control moisture from leaks, condensation, and excess humidity and promptly cleanup any visible mold or remove moldy materials when found. (100-word max) Preventive roof and building maintenance are completed regularly to prevent leaks and moisture/mold issues. When leaks occur, repairs are made promptly by in-house maintenance staff or contracted services. Wet materials are removed and the affected areas are

cleaned and dried of moisture. The building is fully air conditioned to control humidity, and regular maintenance on condensate pans and lines ensure the moisture is removed from the building properly.

9. Our school has installed local exhaust systems for major airborne contaminant sources. Yes No Describe (max 100 words) The school cafeteria kitchen has exhaust systems for cooking and dishwashing that removes airborne contaminants created during food preparation. Restrooms have exhaust systems to remove odors. These systems are directly vented to the outdoors and not recycled in the occupied spaces. General exhaust is provided by exhaust fans throughout the building and the HVAC systems.

10. 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. (100-word max) The buildings HVAC systems are maintained as part of a preventative maintenance program. HVAC units are inspected for proper operation, cleaned, lubricated, and filters changes quarterly during the school year. Reported unit or comfort issues are promptly checked and repaired by maintenance staff.

11. Describe actions your school takes to ensure that all classrooms and other spaces are adequately ventilated with filtered outside air, consistent with state or local codes, or national ventilation guidelines. (100-word max)

To ensure adequate ventilation rates of 6 to 8 air changes per hour, the HVAC units are designed to bring in 20% outdoor make up air. The outdoor air mixes with recycled air from the space, it is filtered, and then returns to the space. Outdoor intakes and dampers, and filters are checked regularly to ensure they work properly and are clear of obstructions. Classroom teachers are briefed on proper operation of HVAC equipment, such as keeping supply and return vents clear to ensure efficient operation of systems.

12. Indicate (X) steps your school has taken to protect indoor environmental quality:

- Implementing [US 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. As part of building preventative maintenance program
- Participating in the Pediatric/Adult Coalition of NJ's Asthmas Friendly Awareness Program
- Other (max 100 words) Our district facilities manager conducts annual indoor Air Quality (IAQ) training with staff to raise awareness and to share reporting procedures.

13. Indicate (X) if your school's green procurement practices pertain to the following: ([Buy Recycled](#) / [Buy Green](#))

- | | | |
|---|--|--|
| • <input type="checkbox"/> Construction | • <input type="checkbox"/> Fleets | • <input type="checkbox"/> Office Supplies |
| • <input type="checkbox"/> Carpets | • <input type="checkbox"/> Food Services | • <input checked="" type="checkbox"/> Paper FSC certified (FSC Co10014 Responsible) |
| • <input checked="" type="checkbox"/> Cleaning –Green cleaning products | • <input checked="" type="checkbox"/> Landscaping – Recycled mulch | • <input checked="" type="checkbox"/> Other (50 word max) paper towels and toilet paper are made from recycled materials |
| • <input type="checkbox"/> Electronics | • <input type="checkbox"/> Meetings & Conferences | |

14. What system do you use to determine if the above products and services are considered sustainable? (ex. DOE Purchasing for Energy Efficient Products, CHPS High Performance Database, Electronic Product Environmental Assessment Tool (EPEAT) DOE Purchasing for Energy Efficient Products, Green Seal Standards for cleaning chemicals, and recycled paper content.

Element 2B: Nutrition and Fitness

15. Which practices does your school employ to promote nutrition, physical activity and overall school health? Provide specific examples of innovative practices, partnerships and actions for each statement below (100-word max each)

- Our students spent at least 120 minutes per week over the past year in school supervised physical education. Our students receive 60 minutes of structured physical education classes each week. Additionally, they receive 150 minutes of teacher supervised outdoor recess. Outdoor recess gives children access to playground equipment, blacktop for ball games, jump rope, etc, the field for soccer, football, etc, and the outdoor walking track. Physical activity is expected and encouraged. In inclement weather, indoor recess activities include physical activities such as Go Noodle, DDR, indoor walking, etc. Several after school clubs offer additional opportunities for physical activity for those who are interested. Clubs include First Tee golf, Firefly Tennis, Girls on the Run, and Let me Run (boys version).

- Our school has a School Wellness Policy that addresses both nutrition AND physical activity. The school complies with all federal and state mandates for nutrition and physical activity under the Healthy, Hunger-Free Kids Act of 2010 (HHFKA). Our Wellness Policy includes goals for nutrition promotion, nutrition education, physical activity, and other school-based activities that promote student wellness. The Board policy is entitled, Wellness Policy/Nutrient Standards for Meals and Other Foods (#8505).
- Our school has a School Wellness Committee that meets at least once a year. We discuss five over-arching goals: safety precautions, crisis planning, student well-being, nutrition, and fitness & community outreach. Topics include healthy food choices, cafeteria selections, and physical activity events or fundraisers. Recommendations for healthier living have resulted in new menu items into the cafeteria, installation of a water bottle refilling station, Wellness Week activities, greater health education outreach to our extended school community, and doubling of recess time which helps both physical and mental health. We have introduced more physical activities and health related learning into our PD offerings. We have eliminated food-centric birthday and holiday celebrations.
- Health measures are integrated into assessments. All students are assessed annually by the school nurse with regard to height, weight, BMI, blood pressure, hearing and vision. The data is tracked over time to identify at-risk children. Also, the physical education program uses the Fitness Gram computer program to track physical strength, agility, endurance, flexibility and speed. Last year we purchased a FitBit to be worn by a staff member who served as our healthy living role model. She periodically updated staff and students about her year-long journey to better living through the tracking of her own eating and fitness habits.
- At least 50% of our students have participated in the EPA's Sunwise, or equivalent program. 100% of our students receive the SunWise program through the National Environment Education Foundation. We have received help through our local hospital, the Hunterdon Medical Center. Additionally, our school nurse monitors and post UV Index (and daily pollen count) on her door. We send out notices and reminders through our newsletter articles on sun safety and the importance of sunblock.
- Some food purchased by our school food service is locally sourced from regional farms. Cafeteria always serves local produce during Farm to School week in September and during the year based on availability and price.

16. What environmental tech. supplements curriculum? (weather station, energy monitoring system, GIS, web cam, etc)

Our weather station is accessible via the internet and used for teaching weather units in science. The current air quality is posted on our school website every day along with a link to our weather station. By using information from our own weather station, and air quality for our exact location, book learning becomes real world learning as students connect knowledge gained in the classroom to their own lives and community. Our new solar array is up and running and visible from many of our classrooms. A large monitor has been installed in the main hallway (visible by all students leaving the cafeteria daily and by all parents at parent pick up) which provides information about how much electricity the array is generating.

17. Describe the type of outdoor education, exercise and recreation available. (100-word max) Our students get 30 minutes of outdoor recess daily, 100% increase from last year. Students have access to playground, sports equipment, and team games are encouraged. Our annual Turkey Trot 2 mile fun run is open to all students and teachers, as is our full day field day with more than 10 inflatables for running, climbing, sliding, etc. The school sponsors both Girls on the Run and Let Me Run which culminates in 5k races. We have a ¼ mile track through the woods that is used for gym class, nature walks, etc. Open air learning is an option with our outdoor classroom from simply moving regular lessons outdoors, to brain breaks, to as base for outdoor studies such as collecting leaves for classification, observations of sun, finding Fibonacci sequences and spirals in nature, etc. Our partnership with the Raritan Watershed Association provides two days of outdoor lessons in the south branch of the Raritan River.

Coordinated School Health, Mental Health, School Climate, and Safety

18. Does your school use a Coordinated School Health approach or other health-related initiatives to address overall school health issues? Yes ___ No If yes, describe your health-related initiatives or approaches: Our district believes in a coordinated school health program that encompasses health education, physical education, health services, nutrition services, counseling services, school safety, health promotion for staff, and community involvement. As the staff members model good nutrition, fitness, and health habits, we also actively engage students in those areas. Teachers embrace brain research and understand the importance of nutrition, hydration, and movement throughout the day. All children have a healthy snack during the daytime, children have free access to our water bottle filling station to encourage proper hydration, and teachers regularly structure brain breaks and movement in the middle of long instructional blocks of times. We have eliminated food-centric birthday and holiday celebrations, instead replacing with healthier options such as extra recess, games, or crafts. The school nurse works in tandem with the gym

teacher to teach health related topics including hand washing, hygiene, how to respect your body, and maturation. Mental wellbeing is also addressed through mindfulness activities which are infused into classroom lessons throughout the school. These activities teach children how to refocus their minds, as well as a variety of group or self-directed relaxation techniques. Some classrooms have incorporated relaxation stations or cool down corners as safe places to decompress when necessary. Children are taught how to identify indicators of tension or frustration in themselves, and strategies that work to reduce those feelings. Teachers also want to engage in healthy living. For instance, based on interest, our physical education teachers measured indoor footage routes so that staff members can complete half-mile and one-mile walking laps for rainy days and harsh winter months when outdoor activity is less feasible. Staff are encouraged to keep healthy through a variety of school run activities including in-school flu shot clinics, New Year, New You fitness club, heart health awareness, breast cancer awareness, Don't Sit, Get Fit day, and many health and fitness related teacher academy PD choices including yoga and Zumba. Parents receive newsletters and bulletins from the nurse, physical education teachers, or the principal related to health and safety (e.g., dental health, handwashing, sun protection, allergens, bee stings, etc.)

19. Does your school partner with postsecondary institutions, businesses, nonprofit organizations, or community groups to support student health, school garden education and/or safety? Yes ___ No If yes, describe partnerships: HBS partners with Class 5 Energy's Schools for Energy Efficiency (SEE) program to reduce energy use. The Weller Health Education Center visits our school annually to teach fourth and fifth grade students about maturation and sex education. In addition to enhancing physical fitness, our partnership with Girls on the Run and Let me Run has taught our students not only the health benefits of running but also the importance of good self-esteem and caring for others. Firefly Tennis and First Tee Golf run after school clubs at our school providing students with the opportunity to get active and learn new sports. Our local hospital, Hunterdon Medical Centre, has been invaluable in helping with our Sunwise program. Through our partnership with the NJ Bar Foundation, many staff members have attended free professional development workshops related to HIB laws including conflict resolution, and school climate. In conjunction with Healthy Schools, Healthy People, students are taught the importance and correct way to wash their hands with the It's a Snap program. During Autism Awareness month, our partnership with nonprofit *MyFriendRyan.org* provides all classes with an autism awareness presentation. My Friend Ryan aims to make the world a more accepting place by increasing understanding and teaching children how to be a friend to those with an autism spectrum disorder (more details in summary Q below).

20. Does your school have a school nurse and/or a school-based health center? Yes ___ No

21. Describe efforts to support student mental health and school climate (anti-bullying programs, peer counseling, etc.): This year, the school has implemented an Social & Emotional Learning initiative. Under the banner of HBS Bobcats ROCK (Respectful, outstanding, caring kids) students will all participate in a yearlong program focusing on five core competencies of self-awareness, self-management, responsible decision making, relationship skills, and social awareness. Each competency will be linked to a character trait (caring, respect, trustworthiness, responsibility, and citizenship) and children will focus on each for a two-month period. Learning will be infused through a series of activities including classroom instruction, assemblies, read alouds, morning announcements, video, crafts, and songs. School spirit enhancement is also infused in the program with the development of school song, spirit days, and buddy classes activities. Mindfulness is infused throughout the year long program.

Autism awareness month saw a huge push in raising awareness, acceptance, and understanding of autism. The activities did a lot to enhance our building climate and create a more inclusive culture, embracing some students who have tended to remain on the periphery in the past (more details in summary below)

Our school counselor visits each classroom with lessons focused on preventing bullying behavior. Fourth grade students all learn about conflict resolution, while our fifth graders learn to be an up-stander, not a by-stander. Through these targeted lessons, all students learn how not be a bully, and what to do when they see bullying behavior occurring. Each year we have several assemblies focused on positive behaviors that we expect to see in our students.

On a personal level, every day at our school starts with our teachers greeting each child at the classroom door with a handshake while looking into their eyes like they are the only person in the world. A simple greeting like this helps to create a positive environment for our students, make them feel safe in our school, and start each day with a smile.

Summary Question for Pillar 2: Describe any other efforts to improve coordinate health and safety, nutrition and fitness, highlighting innovative or unique practices and partnerships. (100-word max) Recognizing our students limited level of understanding of our autistic student population, we developed multiple activities for Autism Awareness month. We had announcements with facts about autism, bulletin boards about famous people with autism, and scavenger

hunts to find autism information hidden around the school. Classes received a push-in lesson through our partnership with [MyFriendRyan](#), a nonprofit which presents workshops for students (and PD for teachers) to make the world a more accepting place for those with an ASD. News Crew, our school news show for kids by kids, also did a special focusing on autism featuring two of our students with high functioning autism who were so proud to be able to act as our resident experts and educate their peers about what it is like to live with the disorder, some of the benefits of autism, some of the challenges, and most importantly what people can do to help them fit in. These activities empowered our most vulnerable population, allowing them to embrace their diagnosis and even feel a sense of pride in how it made them special and instilled empathy, caring and understanding in our general population. Overall, it went a long way to creating a more inclusive culture within our building which is beneficial for the mental health, safety, and happiness of all.

PILLAR 3: EFFECTIVE ENVIRONMENTAL AND SUSTAINABILITY EDUCATION

Element 3A: Interdisciplinary learning that prepares students to navigate the key inter-relationships between dynamic physical and social systems (E/S literacy) is documented, assessed for and mapped.

1. Indicate (X) which practices your school employs to help ensure effective environmental and sustainability education. Provide examples of actions taken for each practice, highlighting innovative practices and partnerships.

X School has an environmental or sustainability literacy requirement. (200-word max) Environmental/sustainability literature is required reading infused into many subject areas including non-fiction reading units in LA, social studies textbooks, and especially throughout our science units. Fourth grade science units include studies of rocks, minerals and landforms which includes the infusion of information about respecting all living things, not disturbing the balance of the local ecosystem, the interconnectedness of ecosystems, and the importance of our reduce, reuse, recycle program. While much of this is learned through hands on experimentation, non-fiction reading is an integral part of the program. Similarly for fifth grade and their living systems unit (more below). We do not have an environmental literacy requirement policy per se, rather it is simply an integral part of our curriculum. This mirrors our philosophy that sustainability and caring for our environment is simply an integral part of daily life at HBS.

X Recurring E/S concepts are integrated throughout an interdisciplinary curriculum. (200-words) Students gain a deeper understanding of environmental and sustainability issues through our multifaceted, multidisciplinary approach. Student studies of climate change are infused through multiple subject areas from non-fiction reading about the impact of climate change on polar bears in Language arts, to analyzing graphs in math to see how climate has changed over time, to studying different energy sources and their environmental impact in science, examining changing shape of the landscape in Alaska due to receding glaciers in social studies, and designing sustainable cities for the future in GT. 5th grade students enjoyed a unit of study about nutrient transport systems, from the microscopic level to feeding relationships in our ecosystem. They studied the impact of changing variables in the environment on plant growth and extrapolated their findings to consider what this means in nature. They considered how our actions can impact plant growth which in turn can impact animal nutrition and ultimately impact us. This message was reinforced through our music program where the concert was based on the book "Wangari's Trees of Peace". Through a book study and online video interviews, children learned about human impact on the environment, deforestation in Kenya, the problems that it causes, and how Wangari Maathia led the movement to combat the problem through trees planting. There was a similar cross curricular connection with the fourth-grade concert based on the book "Olivia's Birds". Through a book study, online videos by the Audubon Society, and classroom discussions, children learned about birds, their habits, and the impact that human accidents such as oil spills can have on them. The script of their performance and lyrics of their songs further reinforced the concept that all animals are special and important to our ecosystem, and we must work together to protect them. This reinforced their classroom science lessons about soils, rocks and landforms which included lessons about respecting all living things, not disturbing the balance of the local ecosystem, the interconnectedness of ecosystems, and the importance of our reduce, reuse, recycle program. Renewable energy sources are discussed in fourth grade science unit about electricity. Students discuss the importance of recycling and upcycling regularly in Discover Lab lessons. In a cross curricular event, students learn about the importance of heart health in gym, learn how to engineer jump ropes from discarded grocery bags in discover lab, and use them to raise money for the American Heart Foundation by exercising during our Jump Rope for Heart fundraiser, addressing pillars I, II, and III in one activity.

X Student learning of environmental & sustainability concepts is evidenced by authentic assessments. (200-word max) All student learning is evaluated throughout the year, both informally, through class discussions and journal entries, and

formally with lab reports, quizzes, end of unit tests, end of unit reflections, essays, or the creation of projects or presentations. More creative assessments have included building a town designed to help humans withstand a natural disaster complete with alternate energy sources, drawing a conclusion about water quality based on the invertebrates children found for themselves in the river, and creating in-house news show segments to educate others about sustainability and changes people can make to their everyday lives to help. More details included with descriptions of specific activities elsewhere in the application.

X Students evidence high levels of proficiency in these assessments. (100-word max) Holland Brook students consistently perform highly on the annual NJASK science test indicating that students are secure on science concepts and can apply the knowledge to alternate situations on statewide testing. Students understanding of scientific content is assessed throughout the year, both informally, through class discussions and journal entries, and formally with lab reports and end of unit tests. Other subject areas assess through unit tests, informational writing, online quizzes, etc. The musical performance and incorporated sustainability content was self-graded by students using a rubric.

X Professional development (PD) in environmental and sustainability education (E/S) are provided to teachers. A group of science teachers has been trained annually for the past five years at the Mickelson-ExxonMobil science education partnership. These in-depth workshops fully immerse teachers in hands on learning experiences that they can bring directly back to the classroom to enhance their teaching. Our district facilitates many in-house trainings both required during PD days, and voluntary through our teacher academy which runs three times a year.

X Describe the PD in which faculty or administrators participated and how it contributed to the implementation of your E/S Goals. When was the PD held? Who attended? (200-words) Teacher academy is our in house professional development program. It runs three times a year with each session offering 20 -30 different choices of PD. These sessions are well attended and are offered spring and fall after school hours or during the summer months. In the last 18 months, offerings related to E/S goals included How to report an indoor air quality concern; keeping children safe outdoors; living healthier lifestyles; Learning Lab – Center for Green Schools; Green Cleaning for Healthy Classrooms; Green Classroom Professional Online Course – Center for Green Schools; Incorporating Solar into the Classroom; and Readington Schools Go Solar. Teacher Academy PD is offered to all staff, administrators, board of education members, and some, such as Readington Schools Go Solar, are open to parents.

X Environmental/Sustainability Education is offered in after-hour school programs (200 words) Our school offers two programs for students and their parents: Family Science and Family Math. Family Science is a free program for students and their parents. It is an evening program during which the families learn different disciplines of the sciences, including sustainability. It culminates in an ice cream making activity where students use their own energy to mix ingredients to create ice cream. We also have an environmental club which meets monthly. The children in this club promote environmental awareness and recycling throughout the building. They create posters and signs to raise awareness and remind people to recycle. The environmental club students are in charge of our nonstandard recycling programs (Little Bite wrappers through Terra Cycle and markers through Crayola Colorcycle) They also focus on upcycling, for example creating bird feeders from milk cartons, personal organizers from cereal boxes, shoe boxes and toilet paper tubes, etc.

Element 3B: Use of (E/S) to prepare students for career pathways and to develop STEM/STEAM content, knowledge, and thinking skills.

2. How does your school use sustainability and the environment as a context for learning science, technology, engineering [art] and mathematics (STEM/STEAM), thinking skills and content knowledge? (200-word max) Our school is unique with 2 classes each week, Innovation & Design and Discover Lab, which incorporate STEM into every lesson. While the primary focus is on problem solving and working collaboratively, sustainability is infused throughout the curriculum of both classes. For example, in Discover Lab, children learn the components that make up everyday electronics by dissecting them at our take it apart table. As children deconstruct electronics, they learn not only identity and function of components, but also what would happen to them in a landfill, and how to safely dispose of old electronics. Children sort the parts and we upcycle them for use in other challenges. In Innovation and Design, students are challenged to create a race car entirely out of recycled materials. Discussions about the importance of recycling is infused, from avoidance of adding to landfills, to saving energy and natural resources in creating new materials. In math, students learn about graphing to track change over time using data about climate change. In science, students learn about the interconnectedness of ecosystems in their visit to the river by analyzing the surrounding environment, the water quality, and biodiversity of wildlife in the water. Science unit about living systems infuses many aspects about the

environment and sustainability, including the importance of composting. Students gather compostable material from the lunch-room, and take it through the process from leftover people food to plant food.

3. How does your school use sustainability and the environment as a context for learning green technologies and/or career pathways? Please describe student performance criteria and assessment results (200-word max) Fourth grade unit of study of the weather incorporates many aspects including extreme weather, connections to and causes of global warming, and what we can do to reduce our contributions to the problem. This is taken to the next level for the GT students who had to design a town to survive a natural disaster. Among other things, they learned structural engineering skills to build houses that could better withstand hurricanes or earthquakes, and how solar panels and wind turbines harness nature's energy and convert it to electricity for our use. They built functioning solar panels and wind turbines and connected them to their structurally enhanced model homes. From witnessing the installation process to learning how they function, our students have learned a lot about solar power. A large monitor has been installed in our main hallway relaying information about electricity generated by the array. Providing daily feedback about the energy being generated keeps the topic of solar panels and alternative energy in the forefront of students minds. Another unit of study is Green City where students are challenged to redesign our town for the future, designed to enhance community feel, reduce environmental impact, reduce reliance on cars, create healthier living opportunities, all while being fiscally responsible. Students had to take on the role of mayor, town planner, environmentalist, parks and recreation, and the finance department, and saw how sustainability impacts each of those jobs. (more info on this project in # 5 below)

4. How does your school address teaching the science of sustainability in your K-12 scope and sequence? What science standards do you target? What evidence of student learning are you assessing for and monitoring in this area? Our building houses fourth and fifth grade. In fourth grade, science units include Energy, Soils, Rocks, and Landforms, and Environments. In their Environments unit, essential questions included what makes up a species' environment and ecosystem and how do they interact? How do organisms interact with environmental factors? What functions do animal structures and behaviors have? What are producers and decomposers? What environmental conditions contribute to a species' range of tolerance and how do they affect the species? These essential questions target 4-LS1-1 and 4-LS1-2 and were addressed through a series of hands on explorations, nonfiction reading, videos, and online interactives. Similar teaching techniques were implemented for their unit Soils, Rocks, and Landforms. Essential questions included what are the properties of soil and what is it composed of? Explain the different types of weathering and what it does. How can erosion and deposition change the Earth's surface? What can you learn from a topographical map? What are Earth's natural resources and how are they used? How can catastrophic events change Earth's surface? This unit covers many sustainability subtopics including global warming, acid rain, conservation of natural resources, and alternative energy sources. Standards addressed included 4-ESS1, 4-ESS2, and 4-ESS3.

In fifth grade, science units include Mixtures and Solutions, Earth and Sun, and Living Systems. In their living systems unit, essential questions included how do plants get the food that they need? How do animals get the nutrients that they need? What are the transport systems for nutrients in plants and animals? Similarly to 4th grade, students learned through a series of hands on explorations (including making compost), nonfiction reading, videos, and online interactives. Standards addressed include 5-PS3-1, 5-LS1-1, and 5-LS2-1. The earth and sun unit focuses on answering the questions what is Earth's atmosphere? How does energy transfer to the air? What is the water cycle? Is planet Earth a system? In this unit, students also focus on how we can use science to protect earth's resources and the environment. Standards addressed include 5-ESS2-1, 5-ESS2-2, and 5-ESS3-1. Student learning is assessed both informally through observation and science journal entries, and formally through quizzes, end of unit tests, and lab reports.

Percentage of last year's eligible HS graduates who completed the Environmental Science / Earth Systems (or similar environmental course) course during their high school career: N/A

Element 3C: Development and application of authentic civic engagement knowledge, skills and dispositions through place based learning experiences (project-based/service) and community partnerships

5. Describe students' civic/community engagement projects integrating environment, environmental justice ([as defined by EPA](#)) and sustainability topics. (200-word max) Fourth grade students learn about interconnected ecological systems. Visiting the south branch of the Raritan River students discovered the importance of protecting our environment and how human activities impact the water quality, which in turn impacts the vegetation, the wildlife, and ultimately us. Under the guidance of Raritan Headwater naturalists, students analyzed water samples, searched and identified invertebrates, and extrapolated what that meant in terms of water quality. Students made connections between human activity and the impact on the river and consequently the wildlife. The impact of litter was discussed and some classes

took action. In a community reliant on well water, making this connection between water quality and the surrounding environment helped the children realize the importance each person can play in protecting the our towns water source. Another unit of study is Green City where students are challenged to redesign our town for the future, designed to enhance community feel, reduce environmental impact, reduce reliance on cars, create healthier living opportunities, all while being fiscally responsible. The students realized for themselves that our town could do more for sustainability. Student passion drove this this classroom into the real world and students have prepared a persuasive presentation for a meeting with our town leaders next month! (more in summary for pillar 3)

6. Describe how outdoor learning is used to teach an array of subjects in contexts, engage the broader community, and develop civic skills. (200-word max) (ex. citizen science, field trips, overnight camping, retreats) We use an outdoor classroom for all subject areas including science, social studies, reading, and for sensory awareness purposes. Outdoor field trips experiences are also plentiful including our visit to The South Branch of the Raritan River (described in #5 above). Students also visit a local museum, Cold Brook School, for living history lessons. The museum, located in our town and run by local volunteers in period costume, offer students a glimpse into life in the past. Students get to dress up in period costume and experience life in the 1800s. Students learned how much our townsfolk in the past relied on the land including hand pumping water from the well, growing most of their own food, and keeping warm necessitated chopping down trees. The trip gives them an insight into how challenging life was in the past, but also gives a whole new appreciation of the importance of the land. It is eye opening to the children to see how people depended on the land in the past for their survival, and it gives them a reality check that how we care for our land really does matter to our future.

7. Describe students' outdoor learning/ place based learning experiences at every grade level. (200 word max) Children in all grade levels participate in various outdoor educational experiences. Each grade level focuses on integrating outdoor activities into their specific science units of study. For instance, fourth graders investigate land and the impact of erosion over time on the land through hands-on experiments in the classroom and outdoor observations. Additionally, fourth grade studies energy and conducts nature walks and outdoor experiments that involve using the sun's energy. Fourth grade also make two trips to the river as part of their science units of study (explained more fully in 5 above). Fifth grade students enjoy using the outdoors to collect and classify leaves by their venation patterns. You will find students taking nature walks to make observations about sun patterns and its relationship to our shadows. GT students unit of study on Fibonacci involved in-depth study of nature. Using digital resources, books, and on nature walks, they discover examples of Fibonacci numbers and spirals in our natural world. Our outdoor classroom is a much sought after learning space and the recent addition of shade trees has made it even more in demand.

8. Describe how partnerships help your school and other schools integrate the 3 Pillars into the curriculum, student learning and school culture. Include both the scope and impact of these partnerships. In what ways is your school sharing & promoting (outside of school) its efforts to uphold all 3 Pillars? (Ex. student exchange forum, sister school program, global PBL program, state-wide professional learning communities) (Max 200-words) Our partnership with Raritan Headwaters has been invaluable and embraces all three pillars. As previously described, this program brings our children together with highly knowledgeable professionals for hands on, feet in the river, lessons that are engaging and meaningful as the children discover for themselves how clean (or not) our local river is based on the wildlife they find in the waters and surrounding areas. Children fully embrace the lessons learned and become much more conscientious about water use, conservation, and keeping waterways clean. Similarly our partnership with Schools for Energy Efficiency (SEE) program has greatly enhanced our cognizance of energy use and improved facility operations, energy conservation policies, and modified staff and student behavior (more details in pillar 1 summary above). The behavioral changes and energy savings are shared with our community through quarterly newsletters, emails, and website so that they can learn along with the children. Our installation of solar panels has raised awareness of solar energy. Information was shared both with both children and community during the installation phase, and people can now track energy being produced by the solar panels. Ameresco partnered with us to present an assembly about solar energy to all grades.

To share the health and wealth that we are fortunate to enjoy, our students do a lot to help the larger community. Student Leaders conduct twice yearly food drives to support the local food pantry, both around the holidays and at the end of the year to help stock the shelves during the lean summer months. For the holidays, a "Giving Tree" is prominently displayed in the main hall, encouraging students and staff to donate new hats, gloves, mittens, and socks. This year, donations are being given to local people in need struggling with mental illness. Students at HBS make Halloween into to a time of giving by taking UNICEF collection boxes with them when they went trick or treat. This year students collected a total of \$871.67, which was then tripled by a supporting company, resulting in a total donation of \$2,615.01 to UNICEF. Two other endeavors include participation in the Math-A-Thon which raised over \$13,000 for St.

Jude Children's Research Hospital this year as well as a Valentine's Day project which raised \$600 for children with Type 1 diabetes. These charitable activities give our students a glimpse in to the need of others, helps to give them a reality check that not everyone lives they way that they do, and teaches them to look beyond themselves, caring for other people and things.

9. How are your descriptions in number 8 supported or enhanced by your efforts in Pillar 1 to reduce environmental impact and costs for your school. (Max 100-words) Our partnership with Schools for Energy Efficiency (SEE) program has resulted in a tremendous reduction in energy use over the last 4 years. Our energy use has decreased from a high of 154.4 kBTU /sq ft to the current 108.4 kBTU /sq ft , a reduction of 30%. The district benefits in terms of reduced expenditure, but more importantly for our environment, we have lower demand on local utilities. The installation of the solar panels has been an amazing addition to our school. Last year, despite panels not going live until February, we produced 323,963 kWh from solar which is about 27% of our total electricity usage for the school year. This year, we expect to see a far higher percentage of our electricity consumption coming from our solar panels. Our partnership with Raritan Headwater gives our students an understanding of the importance of not taking our water source for granted. In a community where the majority of the homes are supplied primarily by well water, it is invaluable to teach children the importance protecting our precious resource through conserving water use and also ensuring that our waterways are kept clean and free of waste, pollution, litter etc.

Summary Questions for Pillar 3: Describe any other ways that your school integrates all three pillars into curricula, student learning and school culture to provide effective environmental and sustainability education. Highlight innovative or unique practices and partnerships. (Max 200-words) Our Green City unit is a truly unique project which fully integrates the three pillars. Students are challenged to redesign our town for the future, designed to enhance community feel, reduce environmental impact, reduce reliance on cars, create healthier living opportunities, provide essential services for our community, all while being fiscally responsible. Students had to take on the role of mayor, town planner, environmentalist, parks and recreation, and the finance department, and saw how sustainability impacts each of those jobs. The students really embraced the sustainability aspect of this project and designed a town which included alternative energy sources, car charging stations, greater public transport (but only electric vehicles allowed), bike share programs, eco building designs, community gardens, and a downtown area that is designed for pedestrians not cars. The children were so excited by the project that they wanted to take it further. They have chosen two aspects of their design (adding recycling bins to our downtown area as there are none, and adding compostable food collections to regular garbage/recycling pick ups) and are making a pitch to the deputy mayor and environment committee members next month in the hope that they will adopt their ideas.