



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

Charter  Title I  Magnet  Private  Independent

Name of Principal **Rabbi Moshe Schwartz**  
(Specify: Ms., Miss, Mrs., Dr., Mr., etc.) (As it should appear in the official records)

Official School Name **Kellman Brown Academy**  
(As it should appear on an award)

School  
Mailing Address **1007 Laurel Oak Road**  
(If address is P.O. Box, also include street address.)

City **Voorhees** State **New Jersey** Zip **08043**

County **Camden** State School Code Number\* **08-0278-56C**

Telephone **(856) 679-2929** Fax **(856) 679-2928**

Web site/URL [www.kellmanbrownacademy.org](http://www.kellmanbrownacademy.org) E-mail [mschwartz@kellmanbrownacademy.org](mailto:mschwartz@kellmanbrownacademy.org)

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

Date **1/30/14**

(Principal's Signature)

Name of Superintendent\* **N/A**  
(Specify: Ms., Miss, Mrs., Dr., Mr., Other)

District Name\* **N/A** Tel.( ) **N/A**

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

**N/A** Date **N/A**  
(Superintendent's Signature)

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



## **PART II – SUMMARY OF ACHIEVEMENTS**

### **Instructions to School Principal**

Provide a concise and coherent "snapshot" that describes how your school is representative of your jurisdiction's highest achieving green school efforts in approximately 800 words. Summarize your strengths and accomplishments. Focus on what makes your school worthy of the title U.S. Department of Education Green Ribbon School.

## **PART III – DOCUMENTATION OF STATE EVALUATION OF NOMINEE**

### **Instructions to Nominating Authority**

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

### **Nominating Authority's Certifications**

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

1. The school has some configuration that includes one or more of grades Pre-K-12. (Schools on the same campus with one principal, even a Pre-K-12 school, must apply as an entire school.)
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

**Bernard E. Piaia, Jr.**  
(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.

*Bernard E. Piana Jr.*

Date 1/31/14

(Nominating Authority's Signature)

The nomination package, including the signed certifications and documentation of evaluation in the three Pillars should be converted to a PDF file and emailed to [green.ribbon.schools@ed.gov](mailto: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](mailto:ICDocketMgr@ed.gov) and reference the OMB Control Number 1860-0509. Note: Please do not return the completed ED-Green Ribbon Schools application to this address.

**School Contact Information**

School Name: Kellman Brown Academy

District: Private School Located in Voorhees, NJ

Street Address: 1007 Laurel Oak Road

City: Voorhees

State: New Jersey

Zip: 08043

Website: [www.kellmanbrownacademy.org](http://www.kellmanbrownacademy.org)

Facebook page: <https://www.facebook.com/pages/Kellman-Brown-Academy/263832969434>

Head of School: Rabbi Moshe Schwartz

Head of School Email Address: [mschwartz@kellmanbrownacademy.org](mailto:mschwartz@kellmanbrownacademy.org) Phone: 856-679-2929 x1709

Principal Name: Emily Cook

Principal Email Address: [ecook@kellmanbrownacademy.org](mailto:ecook@kellmanbrownacademy.org) Phone Number: 856-679-2929 x1702

Lead Applicant Name (if different): Rabbi Moshe Schwartz

Lead Applicant Email:

Phone Number:

Level	School Type	How would you describe your school?	District Name
<input type="checkbox"/> Elementary (PK - 5 or 6)	<input type="checkbox"/> Public	<input type="checkbox"/> Urban	Voorhees
<input checked="" type="checkbox"/> K - 8	<input checked="" type="checkbox"/> Private/Independent	<input checked="" type="checkbox"/> Suburban	<input type="checkbox"/> Largest 50 Districts
<input type="checkbox"/> Middle (6 - 8 or 9)	<input type="checkbox"/> Charter	<input type="checkbox"/> Rural	Total Enrolled:
<input type="checkbox"/> High (9 or 10 - 12)			216
Does your school serve 40% or more students from disadvantaged households?	% receiving FRPL <u>3%</u> % limited English proficient <u>3%</u> Other measures _____		Graduation rate: 100% Attendance rate: 100%
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			

***SUMMARY NARRATIVE:* Provide an 800 word maximum 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.**

Kellman Brown Academy, an NJAIS accredited school, is a member of the Schechter Day School Network. Established in 1958, the early childhood through 8<sup>th</sup> grade school is founded upon the principle of providing an unparalleled academic experience through integrated general and Judaic curricula. In 2008, after outgrowing our home of 50 years in Cherry Hill, our school moved to Voorhees. Our Board voted to embark on an adaptive reuse concept for our new building and we turned an empty and outdated warehouse into a beautiful school.

Kellman Brown Academy was designed following LEED for Schools guidelines with building efficiencies in mind including low flow automatic sinks, glazed concrete blocks of partially recycled materials, renewable linoleum floors, recycled plastics for the bleachers, brand new HVAC (air and heat) with top SEER rating, energy efficient lighting and many more environmentally smart choices. There was “no shovel in the ground” to renovate the warehouse; only one canopy was added to create a covered side entrance for bus arrival and dismissal. As we are constantly looking for ways to reduce our “footprint” some of our more recent enhancements include classroom light sensors, virtualized servers, ACER flat screens, an expanded iPad program for students and faculty, Kyocera’s ECOSYS® Technology printers,

Toshiba's Close the Loop Toner program, a 6<sup>th</sup> grade environmental science elective, a planned weather station, a student composed Environmental Tip of the Week for our family e-newsletter, supporting community recycling initiatives, partnering on healthy eating conferences and green team meetings.

The Board has an ad-hoc committee on sustainability and supports the green initiatives of the school with lay participation and by authorizing expenditures through the operating budget. Our Head of School, Rabbi Moshe Schwartz, developed and manages our Green Strategic Plan containing three main facets; building efficiencies, waste reduction, and expanding curriculum and instruction to develop environmental stewards. Our faculty and staff lead by example.

Waste reduction initiatives include hand dryers in all bathrooms, reduction of personal office printers from 10 to 6, requiring every eligible purchase be Energy Star compliant, elimination of vending machines, replacing Styrofoam products with recyclable paper goods made from post-consumer materials and using cleaning supplies that are green-seal certified. Since 2012, our curriculum has benefitted from the use of 1:1 student and teacher iPads from 5<sup>th</sup>-8<sup>th</sup> grades. Students and faculty access textbooks, personal planners, data collection, presentation tools, cameras, homework, tests, lab simulations and other educational websites via the iPad. While we retained textbooks, there has been a significant reduction of paper handouts. Paper communication to parents is limited to once weekly and has been nearly eliminated through the use of Constant Contact social media and new student management software called RENWEB which also includes a parent portal for homework, announcements, and directories.

Curriculum expansion has involved adding a Common Core aligned STEAM program (STEM+Art) in our lower elementary school that incorporates environmental education and the arts. We send our middle school students each fall to TEVA (<http://www.hazon.org/programs/teva/>), a transforming Jewish outdoor camping and environmental education program to learn about sustainability, ecology, and the environment. Upon return, students lead the way as environmental ambassadors to our school and community. Some of the activities that KBA middle school students have instituted include enhanced classroom recycling, composting, cleaning our grounds, and partnering in community service. (To view a video of this year's student trip to TEVA, go to <http://www.youtube.com/watch?v=yHjOfSOe-uw&feature=youtu.be>) To develop skills in younger students, and thanks to grants and gifts from Eric's Nursery and Landscaping, Whole Foods, The Herb Society of America, and the Shore Family, we built an organic vegetable and herb garden. Students conduct experiments on the soil, study key relationships between dynamic environments, and learn about plant life cycle, energy and human systems while developing critical thinking skills for making environmentally sound decisions. Field trips are but one additional layer to our program. The two most recent STEAM field trips were to Bartram Gardens and Palmyra Cove.

Our bright new facility has many positive effects on our students and staff. Our teachers report that our "green" building initiatives including location of classrooms, choice of paint colors and effective use of technology increase opportunities for differentiated instruction and ensure maximum chances for overall academic success. We are constantly looking for ways to reduce our "footprint" and enhance our program. We have a moral imperative as a Jewish Day School to be at the forefront of educating our students and their families about the Jewish values inherent in this philosophy. For example, in the fall of 2014 we will launch a year-long curriculum that combines the Common Core aligned Earth Science with Rabbinic teachings on the earth focusing on the Sabbatical year (*shmitah*) which on the Hebrew calendar will be observed in the land of Israel starting 9/24/14. For these reasons and so many more, Kellman Brown Academy is an ideal candidate to be named a Green Ribbon School.

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

1. Is your school participating 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. (e.g. EPA Energy Star Portfolio Manager, Eco-Schools USA, PLT Green Schools, NJPALS, Green Schools Leadership Institute, NJ Learns, NJ Sustainable Schools Project, NJ Recycling).

KBA participated in the Yeshiva University Benchmarking Program, funded by the Avi Chai Foundation in 2011 and 2012. This program benchmarked Jewish Day Schools nationwide in a series of categories. We were benchmarked in many categories including those related to facility expense. KBA finished at or near the top of almost every category and has data to support this.

We recently contracted with EnergySolve (<http://www.energysolve.com/>) and are working together to enhance our data in Energy Star Portfolio Manager for further benchmarking and savings.

2. Has your school, staff or student body received any awards for facilities, health or environment? Yes  No

May 23, 2011 Township of Cherry Hill Mayoral Proclamation - Citing KBA for our students "participation in planting trees and improving the landscape and environment of the Cherry Hill Historic Croft Farm."

2011-2012 The Donald Samull Classroom Herb Garden Grant from The Herb Society of America – A gift of seeds to start a student planted herb garden – part of our Taylor Lynne Cohen Memorial Garden.

2012 Jewish National Fund Award for student fundraising resulting in the planting of a grove of trees in Israel.

2012 PSE&G - Celebrate New Jersey "Powered by the Sun" contest for our entry titled "Solar Procedure Story and Video." Produced by students on our iPads to explain the solar process as it relates to water on our planet. **First Place Award** received by KBA's 1<sup>st</sup> grade.

2012 Whole Kids Foundation Grant (Whole Foods) --\$2,000 for garden supplies to help expand our garden, enhance our STEAM curriculum by helping our science classes move outdoors, and encourage students to see the value in farm to table food and sharing the goods with the needy.

2012 GameTime USA Grant for Playground Equipment (over \$6,500 value). The equipment is designed particularly for the space that it will inhabit, and is made from 100% recycled aluminum, plastics, rubber and steel. This equipment encouraged healthy play outdoors and has made recess fitness a fun experience for our students.

2012 In Support of Energy Initiative - A four-school grant written by KBA for \$193,000 of funding from the Avi Chai Foundation ([www.avichai.org](http://www.avichai.org)) and the Kohelet Foundation ([www.koheletfoundation.org](http://www.koheletfoundation.org)). This initiative was an effort to cut costs and be more environmentally friendly. The process to install lighting sensors was carried out by AELUX ([www.aelux.com](http://www.aelux.com)), and in our school also included a change to a 3rd party electric provider. The lighting work was completed at KBA in January 2013. All four schools purchased ballasts, bulbs and fixtures together and use B&F Electric to complete the work, saving nearly \$30,000 by working collaboratively.

December 2013 – KBA selected as host school for 2014 NRG Creatively Green Family Arts Festival.

<http://www.yanj-yaep.org/nrg-creatively-green-family-arts-festival/>

3. Has your school identified or created a place for teachers to go to share lessons on Sustainability?

Yes  No  If yes, where? In addition to our two science teachers and one STEAM teacher working collaboratively with our Green Team Coordinator, our entire faculty shares ideas with other educators online through a number of sources and list-serves. Our virtualized servers have a shared network so teachers can access files placed in the shared work folder.

Has your School Board adopted a Green Strategic Plan? Yes  No

**Initiatives from our Green Strategic Plan include:**

Participate in YU Benchmarking Program, obtain results, analyze and make changes as recommended

Hire AELUX, an energy savings company, to install sensory lighting throughout our building

Conduct an Energy Audit with the Mark Group

Receive a competitive bid from RAI Inc. to install a solar project on our roof (pending structural report)

Upload data into Portfolio Manager

Partner with EnergySolve to participate in the New Jersey Energy Tracking System

Design and update our building utilizing “Green” energy efficient options:

- Update using glazed concrete blocks of partially recycled materials, renewable linoleum floors and special rubber long lasting gym floor.
- Paint using low VOC and eco-friendly paint from Benjamin Moore.
- Install low flow toilets and sinks, electric hand dryers, and epoxy flooring in bathrooms.
- **Ensure all exterior windows are UV rated, contain Argon gas, and have fabric awnings.**
- Fill part of loading dock with sand and recycled tire rubber to create a preschool playground.
- Install energy efficient sensory controlled lighting.
- Purchase HVAC units on roof that are top SEER rated.
- Ensure use of Energy Star copiers, printers and recycled ink cartridges.
- Install recycled plastic gymnasium bleachers and sink basins.
- Designate compact parking spots.
- Integrate computer controlled external irrigation system for garden.
- 2-door entry at every access point. While primarily for security, it also saves energy.
- Re-caulk of all exterior windows (12/12 - Work completed by M. Rosenblatt Roofing).
- Virtualize computer servers from 4 to 1 to reduce power and heat footprint.

**Waste Reduction:**

- Install computer controlled HVAC system on KBA server (networked).
- Utilize One-Call-Now –a reverse call system for emergency alerts (paperless).
- Implement of Constant Contact & RENWEB for communications/student management software.
- Toshiba’s ECOstyle Cartridge Collection Program Participant – Close the Loop.
- Replace office printers with Kyocera’s ECOSYS printers.
- Recycle bins in every classroom and composters for hot lunch and food program scraps.
- Utilize lunch paper plates and napkins from 100% post consumer waste that are degradable.

**Curriculum Expansion for Students & Families:**

- Science elective, 6<sup>th</sup> grade TEVA trip, STEAM program all with environmental emphasis.
- Planning phase for a student run Weather Station as classes collect data.
- Increase trips to learn about environmental issues.
- Actively promote HazonCSA organic produce farm to table program.
  - 13 of the 56 full shares in 2013 CSA were parents, alumni families, and staff
- Distribution center for kosher pasture meats free of hormones and antibiotics for Grow and Behold.
- Promote Sustainable Cherry Hill Community E-Waste & Shredding Event (11/17/13).
- Co-Sponsor Hazon’s Philly Food Festival. (Over 300 people participated in the festival (10/17/13)
- (Ongoing) Collect food for donation to the Samost Jewish Family & Children’s Services Food Bank.



Final GHG emissions rate (MT eCO2/person): 235.9

Offsets: \_\_\_\_\_ How did you calculate the reduction? Portfolio Manager & EnergySolve. Additional 2.39% of electricity purchased was confirmed as renewable energy from Nextera Energy.

What do you use to benchmark your energy use? EnergySolve's NJ Energy Tracking System, Portfolio Manager & Excel Table is based on School data taken from EnergySolve's NJ Energy Tracking System, Portfolio Manager & Excel. As there are multiple sub-meters, and our condo association has not been forthcoming in helping us determine all of our use, this process has been complicated. We experienced significant increase in building usage and enrollment thanks to our move. We are not surprised to see that there are still increases in utility usage. (See above for details)

8. Has your school conducted an energy audit of its facilities? Yes  No  Mark Group, Inc. Philadelphia, PA  
Percent reduction: 35% - From AELUX Report (electricity use only for particular sub-meter). While according to our main meter data, the electric use has increased since our baseline of FY 2010, it has significantly decreased this past year when we made the major lighting changes.

Measurement unit used (kBTU/Square foot or kBTU/student): per square foot

Time period measured: from January 2012 to present

9. Has your school received EPA ENERGY STAR certification or does it meet the requirements for ENERGY STAR certification? (score of 75 or above)

Yes  No  Year(s) and score(s) received: NA - Still in process with EnergySolve guidance using ESPM.

	Electric Energy Consumption (kwh)	Natural Gas Consumption (therms)	Number Students /Occupants	kBTU/Students/ Occupants	kBTU/sq.ft.	% Reduction from FY 2010
FY 2010	236,648.00	12,431.76	227	9,033.71	45.52	Baseline
FY 2011	399,153.00	11,455.61	245	10,234.81	55.66	10.14
FY 2012	481,835.00	8,713.81	265	9,492.34	55.83	10.32
FY 2013	331,520.00	14,576.75	261	9,919.03	57.46	11.95

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

On-site renewable energy generation: 0% Type \_\_\_\_\_ We conducted a full solar analysis with a national leader in solar, Ray Angelini, Inc. They presented a proposal for solar to us on December 18, 2013 along with NFI Industries who owns the other half of the building and manages our condo association. The recommendation was to wait for the price of the panels to come down and the technology to improve in the next 5 years. The payback time will then be cut in half as the current proposal had a payback time longer than the life expectancy of the solar panels.

Purchased renewable energy: 20% of electric is through wind or solar (according to A.C. Electric) with additional 2.39% in renewable according to Nextera, the 3<sup>rd</sup> party provider.

Participation in USDA Fuel for Schools, DOE Wind for Schools, other federal or state school energy program: No

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

Current energy usage (kBTU/student/year): Enter data in table below.

Current energy usage (kBTU/sq. ft./year): Enter data in table below.

How did you document this reduction? AELUX conducted a thorough audit of the existing lighting at Kellman Brown Academy. As a result, we upgraded the 700 series 32W T8 lamps to 800 series 25W T8 lamps and installed 68 occupancy sensors. AELUX was able to increase efficiency, save the school money and reduce energy use, all while maintaining proper light levels. In addition to upgrading the lamps, AELUX actually reduced the number of lamps in many of the fixtures by adding a highly reflective white paint reflector to the fixture to achieve more light from fewer lamps.

12. In what year was your school originally constructed? **2008 (the building was erected as a warehouse in 1996)**  
 What is the total building area of your school? **45,054 square feet**

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

For new building(s): Which green building standard was used? **LEED for Schools**

(LEED for Schools, CHPS Operations Report Card, Green Globes or other)

Percentage building area that meets green building standards: **100%**

Certification and level: **NA** Total constructed area: **NA**

For renovated building(s): Percentage of the building area that meets green building standards: **100%** Certification and level: **NA**

Total renovated area: **100%**

Which green building standard was used? **While our school has not applied for LEED GOLD certification, Bill Cohen, the architect of Cohen Design and Build, states our facility would have qualified for the LEED standard. Our fundraising**

	Water Consumption (gallons)	Total Square Feet	Water Consumption (gals/sqft)	% Reduction from FY 2010
<b>FY 2010</b>	202,000	45054	.0045	<b>Baseline</b>
<b>FY 2011</b>	171,000	45054	.0038	-0.07%
<b>FY 2012</b>	698,000	45054	.0155	1.10%
<b>FY 2013</b>	776,000	45054	.0172	1.27% due to increased usage

**campaign lacked funds to secure the certificate. (<http://www.cohendesignbuild.com/>).**

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 **X- our enrollment increased as has our building use and total employees.**

If yes, please complete the table below, then provide the following information:

Average Baseline water use (gallons per occupant): **.88 gallons per occupant**

Current water use (gallons per occupant): **1.04 gallons per occupant**

Percentage reduction in domestic use: **While we have not shown a reduction, building occupancy on evenings and weekends increased significantly. Specific numbers are not easily obtainable but we now have 17 additional hours of facility rental each week and when the leagues hold home games, there are upwards of 100 additional spectators. The school now holds its own weekend events and hosts study classes open to the community on Monday evenings.**

Percentage reduction in irrigation: **Not available at this time.**

Time period: from **2010 to 2013**

Do you include after-hour activities in your water consumption calculations? (adult sport leagues, adult education, scouting, other community events etc.?) **Yes they consume water but are not reflected in our occupancy numbers. We have a robust after-school program since 2011 from 3:30-6pm with at least 25 students and 3 staff daily. Additionally, we rent to Cherry Hill Travel Basketball full-season, full-team contract, we host weekend shows, hold a student leadership retreat and numerous community programs.**

How did you document this reduction (i.e. Energy Star Portfolio Manager, utility bills, school district report?)

**We indicated what we could in Portfolio Manager though we are still working on getting the sub-meter information from our condo association, which is why we use a spreadsheet developed by EnergySolve.**

15. Describe any strategies you use to discourage single-use beverage containers on school property. Describe how you assure the recycling of those containers at athletic locations, or other outdoor events. **We removed all soda machines from premises, installed water fountains with new filters and installed recycling bins throughout our building.**

16. What percentage of your landscaping is considered water-efficient and/or regionally appropriate? 100% Types of plants used and location: All landscaping elements, trees, bushes, and gardens are native or regionally appropriate. We planted American hollies on our front berm area to insure winter color along with Red Maple trees as street trees. We used Inkberry hollies as our foundation plantings anchored at either end by the Arborvitae and we used a Native Dogwood tree as an ornamental planting at our entranceway to help diversify our overall landscape appearance.
17. What plants are native to your geographic location and how have you incorporated them? Our landscaping incorporates evergreen bushes and flowers native to South Jersey including American Upright Hollies, Red Maples, Inkberry Hollies, Native Arborvitae and Native Dogwood trees. Our vegetable garden is planted in raised beds adjacent to the building.
18. Describe alternate water sources used for irrigation (e.g. roof run-off, parking lot runoff). (50-words max)
- Plants and trees appropriate for rainfall conditions.
  - Water retention pond to collect building runoff and parking lot runoff water.
  - Garden water conservation is achieved through raised beds that conserve moisture.
19. Describe any efforts to reduce stormwater runoff and/or reduce impervious pavement (e.g. rain gardens, bioswales, ponds). (50-words max) Behind our building we have a water retention pond. Also, many of our plants surrounding our premises are immediately against building property and naturally benefit from rain runoff.
20. Our school's drinking water comes from: (X) Municipal water source ( ) Well on school property
21. Describe how the water source is protected from potential contaminants. (50-words max) Our school's water is filtered and tested to ensure protection from potential contaminants by the New Jersey American Water Company.
22. Describe the program you have in place to control lead in drinking water. (50-words max) Our school's water is filtered and monitored by the New Jersey American Water Company to control lead and copper. In addition, our building was constructed in the 1990s with lead free pipes and faucets. Faucets cleaned daily, with "major" cleaning 3x annually. Green cleaning supplies used. (Source: Dave McDonnough, President Dave's Cleaning, Maple Shade, NJ).
23. Does your school have its own well? Yes\_\_\_ No X If yes, did your school comply with all monitoring requirements and did the drinking water meet all applicable standards? Yes\_\_\_ No\_\_\_
24. Describe how your school's site grading and irrigation system and schedule is appropriate for your climate, soil conditions, plant materials, with an emphasis on water conservation: (50-word max) When our building was developed as a school, digital irrigation systems were installed to account for time and climate. The irrigation schedules meet town code and take into account school closures. All toilets and sinks are "low flow" and have restrictions on them. Our water bill of \$187/month proves we don't use a lot of water.
25. What percentage of school grounds are devoted to ecologically beneficial uses? (50 word max) Estimated at 60% or higher of our 13.49 acres of land are devoted to ecologically beneficial use. When looking at our facility one quickly notices a large playground, Taylor Lynne Cohen Memorial Vegetable Garden, composters, water retention pond, and natural woods that are the home to many birds and animals. We have relatively few parking spaces and of those, many are designed for compact vehicles only.

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

26. 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): 8yd dumpster x 4 collections per month x 100% full on collection= 32 cubic yards per month
- B - Monthly recycling volume in cubic yards (recycling dumpster sizes(s) x number of collections per month x percentage full when emptied or collected): 6yd dumpster x 4 collections per month x 100% full on collection = 24 cubic yards 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): Our composting capacity is 160

gallons per month, which should be .792 cubic yards per month. \*Of note, at this time we have stopped composting, as it was not working properly. We are working with Waste Management and Hazon on improving our composting and intend to start again in the spring. Winter 2013 the number is 0 but we based it on what it will be in the spring.

Recycling Rate =  $((B + C) \div (A + B + C) \times 100)$ :  $((24+.792) / (32+24+.792) \times 100) = 43\%$

Monthly waste generated per person =  $(A / \text{number of students and staff})$ :  $40 / 265 = .150$  cubic yards/per person

- Of Special Note \* Our Waste Management trash pickup trucks run on special vegetable oil. WM notified us that by next spring we should be eligible for a reduction in trash pickup due to increased recycling and waste reduction.

27. 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 copy paper; 100% of toilet paper; 100% of eligible cleaning products; (see other parts of application for other examples of products)
28. Do you include after-hour activities in your garbage reduction calculations? (adult sport leagues, adult education, scouting, other community events etc.?) Yes
29. Verify that your school is compliant with the New Jersey Department of Environmental Protection's (DEP) Air Quality Permit requirements. Equipment at schools that require air permits include 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. Also, some schools might require an air permit for certain woodshop operations.  
Our school has the required [New Jersey DEP Air Quality Permits](#). Yes\_\_\_ No\_\_\_ N/A - There was an environmental study done before construction to make sure we were EPA compliant in 2008 to obtain Township permits.
30. Describe how you have reduced your paper consumption, and how you measured that reduction (e.g. working and reviewing online, white boards). (50-word max) KBA has iPads for all students and teachers in grades 5-8; All classrooms have Smartboards or similar projectors. Many have Apple TV to airplay – significantly reducing paper handouts; Copy machines have codes and monthly limits. Communications between school, including teachers and

<p>Flammable liquids Art Room uses a spray known as Fixative that is kept in a locked closet. We have about 10 cans worth.</p>	<p>Corrosive liquids None</p>	<p>Toxics None</p>	<p>Mercury Trace amount of mercury in CFL Lighting –those bulbs were recycled properly by AELUX in 2012 when new energy efficient lighting was installed.</p>	<p>Other: Bio-waste from School Nurse's Office is very minimal but is disposed of in sealed red bags as required. Oil from kitchen is separated and removed in a special disposal. Science Room Chemicals are stored in a locked chemical cabinet. A list of all chemicals and amounts updated as of 10/28/13 may be provided upon request. Provided to Voorhees Fire Dept.</p>
--	-----------------------------------	------------------------	---	---

families is through email and Constant Contact.

31. List the types and amounts of hazardous waste generated at your school:  
How is this calculated? Amounts listed in log.  
How is hazardous waste disposal tracked? Medical waste is tracked in our nurse's log. Other hazardous materials are logged in our science lab. Labpack collects and disposes of chemicals for our school.
32. Describe other measures taken to reduce solid waste and eliminate hazardous waste (on-site composting etc.). (100-word max) Measures taken to reduce solid waste:
- CFL Light bulbs recycled by AELUX and now replaced with improved efficient lighting
  - Ink cartridges recycled & office printers replaced with ECO friendly printers
  - Bottles, cans, and paper recycled
  - Lunchroom plates and napkins replaced with 100% post consumer waste products that are degradable

- While we attempted to compost lunchroom scraps, waste was not breaking down quickly enough. Our waste management company is partnering with us in the spring to begin composting effectively.
- Automated hand dryers installed in bathrooms eliminated paper towel dispensers

33. Which green cleaning custodial standard is used? Green Seal if possible

What percentage of all products is certified? 90%

What specific third party certified green cleaning product standard is used? Green Seal Certified when possible.

Describe the measures your school has taken to use only green cleaning product. Green custodial products used:

- Clean by Peroxy (green sealed certified)
- Biorenewables glass cleaner (green sealed certified)
- Lite and foamy SunFlower Fresh hand soap (green sealed certified)
- Peroxy Protein cleaner and brightener (green sealed certified)
- Ecowise toilet paper (100% recycled)

34. 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.

- Medical waste is logged in the nurse's office.
- Diabetic needles and epipens are placed in locked Sharps Containers.
- Sharps containers are collected by the Perinatal agency annually.
- Sharps Containers are stored in the nurse's closet.
- Red bags are used for excessive bleeding.

35. 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  No  Under guidance of Voorhees Fire Department.

36. Are there any Underground Storage Tanks located at your School? \_\_\_Yes  No If yes, do you have the proper permits for using an underground tank? \_\_\_Yes \_\_\_No NA

Element 1D: Use of Alternative Transportation

37. 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)

- 50% of our students take buses to school (4 buses transport over 100 students each day)
- 20% of our students ride in carpools of multiple families (carpools are heavily encouraged), and parents drive the remaining 30%. 75% of our student body lives within 8 square miles of school and district busing is not provided.
- 4 families who live the furthest from school carpool daily.

How is this data calculated? (50-word max) Carpool data is collected through student enrollment data. Data on our 4 bus routes is available through the local school districts. A note must accompany daily changes.

38. Has your school implemented?

Designated carpool parking spaces. There are cones to direct carpool traffic to a designated line for carpool pickup.

a well publicized no idling policy that applies to all vehicles (including school buses).

a policy that encourages walking and/or bicycling to school?

Vehicle loading/unloading areas are at least 25 feet from building air intakes, doors, and windows.

a Safe Routes to School program or a School Travel Plan? We repainted our parking lot with designated one way arrows and signs to indicate traffic patterns for safe travels.

Walk and Bike to School Days?

a Walking School Bus program?

walking and bicycling safety curriculum? Voorhees Township Police Department does a monthly program in our third grade to educate students on safety. Neighborhood walking and bike safety is part of the curriculum.

Describe activities in your safe routes program: Carpools line up more than 25 feet from the door. Staff is present in the lobby and walk students to waiting cars. Students taking buses line up in the gym and dismiss through side doors. Buses have seatbelts and do not move until everyone's seat belt is fastened.

39. Describe how your school transportation use is efficient and has reduced its environmental impact (e.g. more efficient bus routes, diesel retrofits for buses, use of biodiesel fuel, electric vehicles). (50-word max) **By helping families to arrange carpools and working with the local bus companies on routes we are ensuring transportation efficiencies.**

**Summary Question for Pillar 1**

40. Describe any other efforts toward reducing environmental impact, focusing on innovative or unique practices and partnerships. (100-word max)

**KBA demonstrates commitment by:**

- A. Reduced waste
  - a. Eliminated Styrofoam
  - b. Codes on copiers & ECO printers
  - c. Recycling & Composter bins
  - d. Artwork-strips along hallways
- B. Improved water quality/efficiency
  - a. Eliminated inefficient water sources
  - b. Installed fountains
- C. Minimized Energy
  - a. Implementation of lower wattage lighting
  - b. Reminders to unplug
  - c. Energy-saver modes on printers
- D. Educational Changes
  - a. Health & Environmental programs added
  - b. Garden Constructed
  - c. Constant Contact, OneCall, and RENWEB
  - d. iPads
- E. Community Partner
  - a. Sponsor Hazon Food Festival & Sustainable Cherry Hill events
  - b. Offer families a CSA and healthy meats (Grow & Behold)

**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) **KBA conducted an occupant survey as part of the Yeshiva University Benchmarking program in 2010. Findings are mentioned throughout and may be available upon request.**
2. Describe your school's Integrated Pest Management efforts, including IPM/green certifications earned, routine inspection, pest identification, monitoring, record-keeping, etc.: **Kellman Brown has a fully Integrated Pest Management Program with an annual contract through Hoffman's Exterminating of Mantua, NJ. Robert Larocca, Hoffman's exterminator, is certified by the NJ Department of Environmental Protection (#28839A) and conducts monthly site visits that are logged both in a visible chart in our main office at school (as required by New Jersey law) and kept in a database at Hoffman's. Hoffman's maintains records dating back 4 years. Monitoring and Pest management is achieved with no-pesticide procedures such as glue traps. If necessary, other non-pesticide procedures would be implemented but Mr. Larocca has indicated that none have been necessary.**
3. What is the volume of your annual pesticide use (gal/student/year)? Describe efforts to reduce use: **In 2011 and in 2013 to date, records indicate that 0 pesticide has been used in our building. In 2012, there was one "conventional treatment" to soil and sub-slab structure for possible termites using approximately 15 gallons of treatment (.0707 gal per student). The area in question covered the length of two classrooms. Treatment was done directly into the soil and sub-slab outside the building and was completed on a Saturday. No subsequent treatment was necessary.**

4. 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 conducts both indoor (structural) and outdoor (turf and ornamental) IPM to reduce student exposure to chemical pesticides. *Our IPM is described above in Element 2A question #2.*
  - Our school prohibits smoking on campus and in public school buses. *We have safety signs posted throughout school that highlight location of emergency exit routes, no smoking, steps of hand washing, signs of influenza, signs of heart attack, no bullying allowed, nut free zones, and how to cover your cough.*
  - Our school has identified and properly removed sources of elemental mercury and prohibits its purchase and use in the school. *It is properly removed.*
  - Our school uses fuel-burning appliances and has taken steps to protect occupants from carbon monoxide (CO) *All public areas have carbon monoxide sensors. The sensors work with the computer energy management system to adjust dampers on HVAC in order to increase airflow to the building.*
  - Our school does not have any fuel burning combustion appliances (e.g. boilers, emergency generators, etc.)
  - [NJ Recommends School Radon Testing](#): Our 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 .  Yes  No *Most recent testing conducted by Hera Tech Inc. EPA RCP ID#10747 (11/22/13). Copy of report provided upon request. Our school was built with radon resistant construction features and tested to confirm levels below 4 pCi/L.  Yes  No*
  - Our school has identified any wood playground or other structures that contain chromate copper arsenate and has taken steps to eliminate exposure. *Our school does not have wood playground structures with the exception of the Gaga (Israeli handball) pit, which is treated wood and was built in the past 12 months.*
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) *Cleaning products are stored in locked closets. Most cleaning happens after school is closed. The computer energy management system will increase airflow if too much carbon monoxide is found in the air. Painting takes place over the summer and low VOC eco-friendly paint is utilized. The floor sealer, "Floor Front," is used over the summer and is from Spartan Chemical and is Green Sealed Certified.*
6. Describe actions your school takes to prevent exposure to asthma triggers in and around the school. (100-word max) *Our school has brooms and dustpans in all classrooms to facilitate immediate cleanup as needed. Our nightly cleaning crew emphasizes specific areas of the school reduce exposure to asthma triggers such as dust. Our 16 HVAC units use pleated filters. We conduct air quality testing. Most recently by A.E.S. ([www.aespecialists.com](http://www.aespecialists.com)) following IICRC and Clean Trust standards and using certified labs for test results. January 2014 test provided upon request.*
7. 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. (100-word max) *KBA was constructed on a concrete slab to account for New Jersey's high water level. The concrete was pre-treated with a moisture barrier to prevent ground water infiltration. Floors were tested upon completion of construction and show no mold or water infiltration. We are committed to ensuring a safe building by inspecting rooms and pipes regularly for evidence of leakage and act immediately when concerned. January 2014 report from A.E.S. confirmed low humidity levels and no mold.*
8. Our school has installed local exhaust systems for major airborne contaminant sources.  Yes  No *Yes. All 16 HVAC units have pleated filters and there are separate exhaust systems for science labs, bathrooms and kitchen.*
9. 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) *We change filters (3-4x annually) with the highest-level pleated filters. A comprehensive inspection record with scheduled and preventative maintenance is kept on file. Our HVAC system is computerized and sends notification of any problems.*
10. 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. (100-word max) *When KBA*

contracted with Cohen Design to remodel an old warehouse as a school, we installed energy efficient UV rated Argon gas windows that do not open or close. All windows have fabric awnings for aesthetics and to prevent heat gain. In order to ensure adequate ventilation, consistent with state & local codes, dampers were installed to allow for proper airflow. Also installed, were 16 NEW energy efficient rooftop HVAC units, computer managed for energy efficiency.

11. Describe other steps your school takes to protect indoor environmental quality such as: (200-word max)

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. A.E.S., Marlton, NJ conducted January 2014.

participating in the Pediatric/Adult Coalition of NJ's Asthmas Friendly Awareness Program

#### Element 2B: Nutrition and Fitness

#### **Food and Nutrition, Fitness and Outdoor time**

12. 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). KBA received an award and visit from members of the Philadelphia Eagles organization after being cited for having a top health and physical education program. This was received by applying for the NFL's Play 360 challenge, which we participated in during the 2012-2013 school-year.

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

Our school participates in a Farm to School program to use local, fresh food. In addition to being active in the Community Supported Agriculture (CSA from Lancaster Farm Cooperative) and Grow & Behold for Kosher hormone free meats, our school hot lunch incorporates seasonal fresh vegetables from our garden. Our pizza, made off-site comes in boxes certified from the sustainable forestry initiative (sfiprogram.org), which "integrates the protection of wildlife, plants, soils and water with a continuous supply for future generations." We only take 1 delivery of pizza for all 5 lunch shifts and 1 delivery of fruits/vegetables/meats each week, reducing travel required by the stores.

Our school has an on-site food garden that teaches nutrition and environmental education. The Taylor Cohen Memorial Garden is planted, weeded, harvested and utilized by grades K-8. One example of a nutrition lesson recently taught in our 5<sup>th</sup> grade includes review of FDA discussions regulating trans fats and how health is an important part of our lifestyle. The students reflected on whether they agree with regulating trans-fat and how upset they would be to remove certain foods from their diets. Over the summer, the office has dress down garden days.

Our school garden supplies food for our students in the cafeteria, a cooking or garden class or to the community.

Our students spent at least 120 minutes per week over the past year in school supervised physical education. All students have gym 80-90 minutes per week and recess daily for 25 minutes. We also include regular movement breaks in the classroom.

At least 50% of our students' annual physical education takes place outdoors. Weather permitting, recess and physical education are outdoors.

Our school participates in the NJ Safe Routes to School Resource Center. Level and year: \_\_\_\_\_

Our school participates in International Walk to School Day in October and/or National Bike to School Day in May.

Our school has a School Wellness Policy that addresses both nutrition AND physical activity. Our school nurse, counselor and physical education instructor are currently revising this program. Throughout our school are signs posted indicating the steps involved in good hand washing, how to cover your cough, eating healthy, how to avoid influenza, emergency exit procedures, no bullying and nut free zones.

Our school has a School Wellness Committee that meets at least once a year. Yes. Led by our principal and school nurse and including the guidance counselor, chef, and physical education instructor.

Health measures are integrated into assessments. This is done as part of the health program.

At least 50% of our students have participated in the EPA's Sunwise (or equivalent program).

A certain percentage of the food purchased by our school food service is locally sourced from regional farms. Percentage: 20% Type: From our school garden or other local farmers markets.

13. Does your school compost lunch waste on-site? If so, what percent? How much is used in your outdoor classroom?

We are working with our green Waste Management Company on bringing a representative to our school to teach our students more about composting and help us start the process again in the spring. They have already sent someone to learn more about our school and prepare for this.

14. What environmental technology is used at your school? (e.g. weather station, composting, rain garden)

At KBA, we use gardening, Smartboards with Internet access and iPad technology to learn about weather. On a daily basis, second graders maintain a temperature log and 8<sup>th</sup> graders are currently planning a weather station. In addition, through the use of the iPads we are reducing waste by switching to simulated experiments when possible.

15. Describe the type of outdoor education, exercise and recreation available. (100-word max)

Our outdoor education was greatly enhanced by the construction of an organic vegetable and herb garden. On a weekly basis our science classes visit the garden to experiment on soil, weed, and harvest. In addition, on a daily basis (weather permitting) our students have recess outdoors where they can utilize sports fields, a walking path or playground equipment. Our teachers organize games on the field or supervise the students in our gaga pit. Parent volunteers organize a daily running/walking club for students to encourage laps on our track.

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

16. 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 the health-related initiatives or approaches used by the school: Our school nurse, physical education teacher, and counselor coordinate on health and fitness education. Every year we run a Jump Rope/Basketball for Heart Program that is both an active fundraiser for the AHA, fitness experience and opportunity to discuss heart health with our students. This year, we held the first annual KBA Race for Education on 11/14/13. The entire student and faculty body and many parents participated in a walk/jog multiple times around our ¼ mile track. We raised \$29,000 for athletic equipment, a full basketball court, and to update the library and computer lab. The success of Race for Education was based on students bringing in the names of people who were potential sponsors for the jog-a-thon. Students sent out personalized letters to ask sponsors to contribute a tax-deductible donation to the PTG. Students and classes earned prizes based on their participation in our race. Race for Education was great fun for the students, no hassle to parents, built our health initiatives, and fully benefitted the school's educational program!

17. Does your school partner with any postsecondary institutions, businesses, nonprofit organizations, or community groups to support student health, school garden education and/or safety?  Yes \_\_\_ No

If yes, describe these partnerships:

- Hosting an NRG Creatively Green Family Arts Festival. (Spring 2014) <http://www.yanj-yaep.org/nrg-creatively-green-family-arts-festival/>
- Hazon CSA a community of food enthusiasts interested in supporting local farming with a keen interest in delicious vegetables, personal health, the planet, and ties to Jewish traditions, helped us build our garden, enhance our lunch program, and educate our students on farming. We also partnered with Hazon CSA on the Hazon Food Festival (10/17/13) and membership in an organic vegetable program delivering from local farms.
- Sustainable Cherry Hill partnered with us on our garden. We also promoted their Community E-Waste & Shredding Event on November 17th to recycle electronics and shred paper in an environmentally friendly way.
- Partnered with our "Green" Waste Management Company to educate our students on waste reduction, recycling, composting, and green careers.
- KBA is the only South Jersey distributor for Grow and Behold non-hormone pasture raised kosher meats.
- Partner annually with Jewish Family & Children's Services to collect food for the needy and teach our students about giving healthy food back to the community.
- The Voorhees Police & Fire Departments annually visit our school (Adopt-A-Cop & Fire Prevention Programs).
- Drexel University partnered on science education (STEM Enrichment & Graduate Student Projects). (2010-2012)
- Rowan University shared with our students on engineering topics (Engineers on Wheels). (2010-2012)
- Local dentists visit our preschool to educate students on good oral health annually.
- Male and Female physicians speak with our girls and boys separately on health issues annually.

- Camden County Nurses do vision, hearing and scoliosis screenings annually.

18. Does your school have a school nurse and/or a school-based health center?  Yes \_\_\_ No
19. Describe your school's efforts to support student mental health and school climate (e.g. anti-bullying programs, peer counseling, etc.): K-5 students participate in sessions with our counselors utilizing the Second Step Curriculum. This pro-social curriculum teaches empathy, problem solving, and anger management, utilizing a multi-sensory approach. Middle school students have advisory to address organizational, academic, and problem solving skills.
20. Describe your school's efforts to support student mental health and school climate (e.g. anti-bullying programs, peer counseling, etc.)

Our school has a bullying policy, character grams to recognize outstanding behavior, and a Student Behavioral Pledge that students recite each morning. Our pledge states:

**I pledge to:** Treat others with *Kavod* - כבוד (**Respect**)

Avoid *L'shon Hara* - לשון הרע (**Use kind words**)

Perform acts of *Hesed* - חסד (**Kind actions**)

Stand up for myself and others and be a *Rodef Shalom* - רודף שלום (**Seeker of Peace**)

### Summary Question for Pillar 2

21. Describe any other efforts to improve coordinate health and safety, nutrition and fitness, highlighting innovative or unique practices and partnerships. (100-word max) KBA participated in the NFL Philadelphia Eagles Play 60 Challenge. The Eagles challenged KBA students to be active for 60 minutes a day, while tracking their progress for four weeks. In March, we took twenty-five grand prizewinners to Lincoln Financial Field to participate in a Field Day with professional Eagles players. Our students learned heart health, fitness logging, and the importance goal setting.

### PILLAR 3: EFFECTIVE ENVIRONMENTAL AND SUSTAINABILITY EDUCATION

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

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. (200-word max)  
While environmental and sustainability topics are taught in science across the grades, we also read books about science as part of our Rigby Literacy by Design curriculum. Students meet biweekly in small groups to read and discuss a series of books on their level. Of those books there are always a few on science and nature topics. Though there is not an environmental or sustainability requirement, it is a natural part of our curriculum.
- Environmental and sustainability concepts are integrated throughout the curriculum. (200-word max)  
The concepts of environmental responsibility and sustainability spread beyond the science classroom and are part of the discussions in reading groups, current events, social studies, bible, math and writing. We believe learning about the environment across an integrated curriculum sends a message to our students positively affecting their actions.
- Environmental and sustainability concepts are integrated into assessments. (200-word max)  
Our science teachers take classes outside to observe living and nonliving things, learn about the parts of a plant, record temperature, and think about how a garden is a system. They also learn about the clouds and weather. All of these concepts are taught and later assessed through tests, reports or demonstrated expressions in art or on iPad.
- Students evidence high levels of proficiency in these assessments. (100-word max)  
KBA students really benefit from the multi-sensory hands-on approach to learning in the garden. In addition, through a special trip in 6th grade known as TEVA where students spend a week at a Jewish environmental experience, they develop a fine level of understanding evidenced on class tests when it comes to reducing environmental footprint.
- Professional development in environmental and sustainability education are provided to all teachers. (200-word max)  
We constantly teach our staff about modern technology such as Smartboards, iPads, websites and apps that will help them to reduce their need for paper products. We also guide them with reminders of best environmental

practices such as unplugging before breaks, opening/closing window shades nightly, recycling and more to help them reduce their carbon footprint.

Element 3B: Use of the environment and sustainability to develop STEM content, knowledge, and thinking skills

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: \_\_\_\_\_ Percentage scoring a 3 or higher: \_\_\_\_\_ N/A

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? (200-word max)

In 2012, we began a Kindergarten and 1<sup>st</sup> grade STEAM class combining environmental education and the arts. Students conduct experiments on soil, speak about key relationships between dynamic environments, energy and human systems and develop critical thinking skills that will equip them long term in making environmentally sound choices. As this program has been so well received, we are committed to continuing and expanding STEAM in years to come. In grades 2-8, students conduct garden and outdoor experiments and perform iPad simulations. They form hypotheses, design experiments, collect data, determine how to measure success, and chart results.

4. How does your school use sustainability and the environment as a context for learning green technologies and career pathways? (200-word max)

On past career days, we brought in an environmentalist to teach students about green careers. This year for the first time, we are bringing a representative from our "green" Waste Management Company, (<http://www.wm.com/index.jsp>) to teach our students about composting and recycling. A culminating experience will include a trip to the Waste Management Company to learn first hand of their efforts to be a green company. In addition, all of our 6<sup>th</sup> graders travel to Connecticut for a weeklong TEVA retreat (<http://isabellafreedman.org/environment/teva>). This retreat provides experiential learning that fosters Jewish and ecological sustainability and teaches students about their future as environmental stewards.

Element 3C: Development and application of civic knowledge and skills

5. Describe students' civic/community engagement projects integrating environment, environmental justice ([as defined by EPA](#)) and sustainability topics. (200-word max) Students at KBA are actively involved in our garden, recycling, and community service projects ranging from teaching younger disadvantaged students to read or volunteering at a local nursing home. In addition, they have raised money annually for the Jewish National Fund in Israel to plant trees. When our 8<sup>th</sup> graders annually travel to Israel they participate in tree planting, for which we have a plaque hanging in our office. Students have also been recognized with a Proclamation from the Mayor of Cherry Hill Township for volunteering to cleanup and plant in local parks. Most notably, students have brought home ideas from TEVA that have transformed our school, our families, and our school's commitment to partnering with HAZON on community education.

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) Outdoor learning in our garden or by the pond has been used to teach our students about animals, soil, climate, and the balance of nature with respect to the role humans play in protecting wild life. Specifically, fourth grade uses the pond to look at different animal habitats and ecosystems. First, students observe to see what living or non-living things can be found and to learn how they interact in an ecosystem. Second, students look at water samples to observe small living creatures. The students all get the chance to look at samples of the pond water under a microscope in order to determine if a living thing could survive in a single drop of pond water. This hands-on learning teaches and really inspires our students in the sciences. In addition, our Jewish studies teachers have expanded on the learning by having students focus on biblical environmental laws and how they relate to practices today.

7. Describe students' meaningful outdoor learning experiences at every grade level. (200 word max)

Some recent topics include:

K – recycling & lifecycle (example: STEAM trip to Palmyra Cove)

1<sup>st</sup> grade – grassland conservation (example: STEAM trip to Bartram Gardens)

2<sup>nd</sup> grade – temperature and meteorology (outdoor experiments)

3<sup>rd</sup> grade – plant lifecycle, power alternatives (garden, water retention basin)

- 4<sup>th</sup> grade – classification of plants, conservation of natural resources & renewable resources, protecting the rainforest, pond experiments and “green” homes (11.5 acres of property)
- 5<sup>th</sup> grade – soil conservation & erosion (garden, greenhouses)
- 6<sup>th</sup> grade – environmental elective, in addition to the life science class, using the No Impact Program Curriculum
- 7<sup>th</sup> grade –physical science and energy generation & conservation
- 8<sup>th</sup> grade –Earth sciences with topics such as weather station, air quality, and erosion

We have an annual field day at the 65 acre JCC Camps at Medford campus and use our own 11.5 acres of woods surrounding our school which we own. Aside from TEVA, students in 8<sup>th</sup> grade travel to Israel for two weeks where they spend time on a *kibbutz*, and for the past several years have stayed and studied at the Arava Institute for Environmental Studies (<http://arava.org/>) a leaving program in Israel at the forefront of these important issues.

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. (Maximum 200-words)

We have partnered with several Jewish Day Schools and received significant funding to upgrade the lighting in all of our schools. KBA was the lead author of this grant but all schools are benefitting. We have also collaborated with these schools on what is known as the Smart School Initiative funded by the Philadelphia based Kohelet Foundation ([www.koheletfoundation.org](http://www.koheletfoundation.org)) to bring educational supports to 9 area day schools. This includes but is not limited to the 1:1 iPad program. We participated with the Politz Day School on several programs, most recently a joint eco-program at Croft Farms Arts Center in Cherry Hill attended by the Mayor. We also have hosted multiple elected officials to speak on these topics including U.S. Rep. Rob Andrews and State Senator James Beach who visited in November and December 2013.

### Summary Questions for Pillar 3

9. Describe any other ways that your school integrates core environment, sustainability, STEM, equity and environmental justice issues ([as defined by EPA](#)), green technology and civics into curricula to provide effective environmental and sustainability education, highlighting on innovative or unique practices and partnerships. (Maximum 200-words)

KBA’s strategic plan for greening our school through changes to our building, green products, minimizing waste, recycling, increased education and partnering with our community to reduce carbon footprint show we are committed to growing Jewish environmental stewards. Through iPads, Smartboard, RENWEB and other technology, we are educating our students on tools that are essential for being environmental stewards. Already, students traded in notebooks for the app known as Notability, paper planners for calendar apps, and some books for online texts. However, the most valuable tool on the iPad for teaching about the environment has been the Internet. By providing immersive experiences that enhance our overall program, we are teaching students and their families about a green lifestyle far beyond the actual curriculum.

10. 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. (Maximum 100-words) All of KBA’s efforts outlined in Pillar 1 (Reduced Environmental Impact and Costs) are enhanced by our programs, as show our commitment to changing the world through leading by example. The Rabbinic tradition teaches about the commandment of *tikkun olam*, repairing the world. We teach it, live it and model it each day. We hope our leadership serves as a model for our families to embrace in their homes and for their lives.