



School Nominee Presentation Form

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

Public Charter Title I Magnet Private Independent Rural

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

Official School Name: Lanier High School (As it should appear on an award)

Official School Name Mailing Address: 918 Buford Highway, Sugar Highway, GA 30518 (If address is P.O. Box, also include street address.)

County: Gwinnett State School Code Number *: 667-1018

Telephone: 678-765-4040 Fax: 678-765-4049

Web site/URL: www.lanierhs.org E-mail: Christopher_Martin@gwinnett.k12.ga

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

(Principal's Signature)

Date: March 23, 2018

(Principal's Signature)

Name of Superintendent: Mr. Alvin Wilbanks

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

District Name: Gwinnett County 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

(Superintendent's Signature)

Date: March 29, 2018

(Superintendent's Signature)

Nominating Authority's Certifications

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

- 1. The school has some configuration that includes grades Pre-K-12.
2. The school is one of those overseen by the Nominating Authority which is highest achieving in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental and sustainability education.
3. The school meets all applicable federal civil rights and federal, state, local and tribal health,



environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

Name of Nominating Agency: Georgia Department of Education

Name of Nominating Authority: Mr. Richard Wood

(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.

A handwritten signature in black ink that reads "Richard Wood".

Date: March 29, 2018

Lanier High School (LHS) believes it is important to have our students become leaders within our school and in our community. As a GCPS “Academy School” (<http://lanierhs.org/>), our students are immersed in project based learning by engaging in real-world STEM activities. Additionally, community experts in various STEM fields speak to our students and offer real-world connections to what they are learning, as well as provide inspiration of pursuing careers in the Environmental pathway. For example, students are involved in hands on learning by participating in chemical and biological monitoring of our local school stream. We partnered with Elachee nature center which come to the school to teach the students about stream ecosystem while catching macro-invertebrates and determining the overall health of the stream.

Our school strives to reduce solid waste, water and energy usage throughout our daily operations. We are ENERGY STAR certified and upgrades include occupancy sensors and lighting retrofits in all classrooms. To help reduce energy usage and costs, The Environmental Club places light and projector “turn off” reminders in all classrooms and office spaces. Computers and copiers are set to Energy Star “sleep mode.” Our Media Specialist designates specific days/times that the laminator can be utilized, and all staff follow the district’s “unplug and put away” protocol prior to leaving for extended breaks. Personal lamps, refrigerators, and microwaves are restricted from individual classrooms.

LHS is committed to improving the health & wellness of our students and staff. In addition to participating in the Farm to School program, our cafeteria staff takes part in the Nutrition Education and Training (NEAT) program. Cafeteria staff visit classrooms to teach students about proper nutrition and provide taste tests for locally-grown foods. LHS adheres to the Smart Snack guidelines for lunch menus and vending machines. Through our Physical Education program, students participate in Fitness Gram assessments which tests aerobic capacity, muscular strength and endurance, flexibility, and body composition. Scores determine overall physical fitness levels and suggest improvements when appropriate. Our school nurse reviews menus for carbohydrate counts, especially helpful for students with Diabetes. Our Life and Health Science Academy students collaborate with the city of Sugar Hill to host the “Health Wellness” Fair annually.

LHS was also recognized by DOT’s Georgia Commute Options Program for being the first school in Gwinnett County to have 6 designated parking spaces for “carpooling” teachers and students. Since 2010 LHS has partnered with The Clean Air Campaign to implement a “No Idling Campaign” and “Ride the Bus Campaign”, both designed to reduce idling and



reduce air pollutants. Our students conduct ozone testing and air particulates testing and how to use living algal/fungus (lichens) to determine our air quality. We compare that to the county's ozone and particulate result from the county.

In an effort to reduce waste LHS has a community partner the WES foundation (leukemia research) in which our students repurpose water bottles into works of art called "Flower Power" program. The flowers are then delivered to cancer patients in local hospitals. Our students also participate in an education campaign called "Refill not Landfill" whereby the students teach their peers how to reduce waste by using reusable water bottles. During Earth week, Students sign environmental pledges and host a "Global Tea Party" with students representing different parts of the world. Students educate each other on global careers as well as global environmental impacts. Organics items are brought in for students experience foods from around the globe.

In order to provide authentic learning we also take our students to Johns Creek Environmental Campus Wastewater Treatment plant annually, for them to learn the process it takes to maintain our drinking water. They also get exposed to opportunities such as an internship where they can shadow actual operators and gain an understanding of the fundamental of the water & wastewater treatment process.

Our environmental stewardship extends beyond our school's walls and into our outdoor garden. With grant funding, we installed a fully functioning outdoor "living classroom". There are gardens beds, a butterfly garden, a compost bin, 2 rain barrels and picnic tables. We have included birdhouses, butterfly and a bat house including bird feeders. Future plans include a functioning greenhouse. We also plan to expand our outdoor learning classroom to include picnic tables are our adopted stream area as well.

Two Lanier students were selected to participate in Gwinnett Clean & Beautiful's Green-Youth Advisory Council. These students work with other high school students from throughout our district to help lead environmental service projects within Gwinnett County. This council provides excellent leadership opportunities for our students. One of their many outreach projects included collecting over 700 books to donate to the Path project which serve our local children in need.

Since our school's beginning in 2010, Lanier's students and teachers have been committed to setting the bar high for environmental stewardship and sustainable programming. For the many reasons we've mentioned above, we know that Lanier High School is deserving of being named a National Green Ribbon School.

2018 Georgia Department of Education Green Ribbon Schools Application

School Contact Information

School Name: Lanier High School

Street Address: 918 Buford Highway

City: Sugar Hill State: GA Zip: 30518

Website: www.lanierhs.org Facebook page: www.facebook.com/lanierhighlonghorns/

Principal Name: Dr. Christopher Martin



Principal Email Address: Christopher_Martin@gwinnett.k12.ga.us Phone Number: 678-765-4040

Lead Applicant Name (if different): Jeannie Lanio and Christy Battle

Lead Applicant Email: Jeannie_Lanio@gwinnett.k12.ga.us Phone Number: 678-765-4040

<p>Level</p> <p><input type="checkbox"/> Early Learning Center</p> <p><input 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 checked="" 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><input type="checkbox"/> Magnet</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>Gwinnett County Public Schools</p> <p>Is your school in one of the largest 50 districts in the nation?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <hr/> <p>Total Enrolled:</p> <p>1833</p>
<p>Does your school serve 40% or more students from disadvantaged households?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>% receiving FRPL 34%</p> <p>% limited English proficient 10%</p> <p>Other measures _____</p>	<p>Graduation rate: 92%</p> <p>Attendance rate: 95%</p>	

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

Yes Program(s) and level(s) achieved:

Yes, *Reaching Higher* Green & Healthy Schools (GHS) designation since 2008. The GHS Program is a collaborative effort between Gwinnett County Public Schools and Gwinnett Clean & Beautiful, a nonprofit affiliate of Keep America Beautiful. The GHS Program creates a framework for environmental and sustainability education that engages our students in all content areas by using real world projects to positively impact our community.

Yes Lanier –current Energy Star=99

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

Yes

Award(s) and year(s)



- ♻️ Our Lanier High School Custodial staff receive an exemplary custodial award every year from the county, (this is pertaining to maintaining the school according to GCPS standards, environmental best practices, training and supply management etc.)
- ♻️ Our school also has earned the distinction of a “Reaching Higher” Green & Healthy School for the past eight years.
- ♻️ In 2017 Jeannie Lanio was awarded “Project WET” Georgia Educator of the Year.
- ♻️ For the past three years we have had students recognized as part of the Youth Advisory Council for Gwinnett Clean & Beautiful.
- ♻️ Last year 2017 Christy Battle and Jeannie Lanio were awarded “Green Educator Awards” from Gwinnett Clean & Beautiful and were recognized for our green efforts with our students at the Governor’s Deal luncheon at the Infinite Energy Center.
- ♻️ For the past two years we were awarded a grant from the Lanier Education Foundation to help us start a school garden, create an outdoor learning environment in the stream site, purchase three tower gardens for our Biology department and maintain our recycling efforts at our school.
- ♻️ For the past four years we have been recognized by Gwinnett Clean & Beautiful for the Great American Clean-up for collecting approximately 500 children books. We have donated them to different locations, including Gwinnett Children’s shelter, Orphanage in Peru, local daycares, Friends of refugees and last year to The Path Project which helps serve our local children in need.
- ♻️ Lanier High School was recognized by Georgia’s Dept. of Transportation’s-Georgia Commute Options Program, for being the first Gwinnett County School to have designated “carpool” parking spaces.
- ♻️ Lanier was recognized in 2016 at the Georgia State Capital for being a state finalist in the US. Dept. of Education’s Green Ribbon Program.
- ♻️ We won 1st place for “Get There Green” from the Clean Air Campaign 2014-15 in State. The students created their own green transportation plan while educating elementary students at Sugar Hill Elementary about air pollution and caring for the environment.
- ♻️ We won the “Get There Green” award from the Clean Air Campaign 2013-2014 3rd place in State. The students created stations with each station representing a different part of the world and the environmental issues students rotated make some arts and crafts while learning about the plights of these countries.

Pillar I: Reduced Environmental Impact and Costs

Energy

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

(X) Yes, Percentage reduction: 43% Over (m/yy - m/yy): 10/11-12/17

Initial GHG emissions rate (MT eCO₂/person): 1.628



Final GHG emissions rate (MT eCO₂/person): 0.935

Offsets: N/A How did you calculate the reduction? Energy Star.gov website and enrollment

2. Do you track resource use in EPA ENERGY STAR Portfolio Manager? (X) Yes

If yes, what is your score? 99 If score is above a 75, have you applied for and received ENERGY STAR certification?

(X) Yes Year: 2012

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

Current energy usage (kBTU/student/year): 7,714

Current energy usage (kBTU/sq. ft./year): 76.6 (Site EUI)

Percentage reduction: 7.2% over (m/yy - mm/yy): 07/2011-12/2017

How did you document this reduction? UTILITY MANAGER REPORT & ENERGY STAR PORTFOLIO

5. In what year was your school originally constructed? 2010

What is the total building area of your school? 435,078

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

Water and Grounds

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

Average Baseline water use (gallons per occupant): 1.97 Kgal/student/yr

Current water use (gallons per occupant): 1.67 Kgal/student/yr

Percentage reduction in domestic water use: 15.3%

Percentage reduction in irrigation water use: We irrigate all fields from reclaimed water, and use 0 gallons in domestic water supply for irrigation

Time period measured: 10/2011-12/2017

How did you document this reduction (ie. ENERGY STAR Portfolio Manager, utility bills, school district reports)?

At Lanier HS, the irrigated athletic fields comprise 6.95 acres. We pump 1" of water onto these fields each week. During the seven-month growing season (from April to October) approximately 1,321,042 gallons of storm water and well water is applied to the fields. This amount of water would have been purchased from the county potable water system.

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

100%, Since there is no irrigation in the planting areas Types of plants used and location: Indian hawthorne, lorapetulem, turf grass, crepe myrtles, and other woody stem hardy shrubs used as borders and front plantings, and also in landscape beds that do not provide enough sun for turf grass.



9. Describe alternate water sources used for irrigation.

All four athletic fields on campus are irrigated with well water and stored storm water. The storm water is stored in a holding pond and supplemented (as needed) with well water. A pump in the pond pushes the water through a system to the fields. The controls are centrally controlled to avoid overwatering. No irrigation is used on the remaining campus.

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

Storm water generated by the athletic complex is stored and used for irrigation on the athletic fields.

11. Our school's drinking water comes from: (X) Municipal water source

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

The irrigation water is stored in a pond enclosed with a 6' tall fence. The boundary area of the pond is heavily vegetated.

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

We rely on the program currently monitored by Gwinnett County Department of Water Resources.

14. What percentage of the school grounds are devoted to ecologically beneficial uses? 40%

The trees, turf and shrubs create habitat and food sources for birds and other animals, absorb carbon dioxide, release oxygen, reduce surface water runoff, control erosion and cool the atmosphere. Detention ponds create habitat for wildlife, control storm water runoff, and reduces the sedimentation that would be discharged downstream. GCPS also recycles the storm water runoff as the detention pond water is used to irrigate athletic fields; thereby eliminating the need for municipal water consumption.

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

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

Lanier has reduced solid waste for the past two years in a row. The compactor at the high school is hauled as needed, when full. New compactors were installed in the Fall of 2016 and have an indicator light to signal when the unit is full. This new unit also appear to achieve a slightly lower compaction, so the density of the waste when hauled is lower, resulting in a few more hauls per year for the reduced tonnage. Mass is actually a more consistent indicator of solid waste volume. However, the units are full when emptied, so the estimated volume of 34.5 cubic yards per haul would be appropriate to calculate annual volume, if volume is required.

<u>Year</u>	<u>Tons</u>	<u>Hauls</u>
FY15	139.5	16
FY16	127.8	19
FY17	118.3	21

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



Since 2014 Gwinnett County Public Schools are required to pay monthly to have their paper collected for recycling. We have continued the program with the generosity of Dr. Gresham, the Lanier Teachers and Staff that have and continue to donate money and the Environmental club fundraising events. Lanier's Environmental Club continues to have fundraisers throughout the year to be able to continue our recycling program here at Lanier High School. Examples are Bake Sales, cookie dough sales, T-shirt fundraising, and lunch donations. For the past three years Lanier High School has partnered with Charity Recycling Services, a textile recycling company, to help reduce the amount of textiles being landfilled in the US. Our school earns money based on the volume of textiles collected, which also allows clothing to be re-used that in some cases would otherwise end up in the landfills.

We have just recently contracted with a new company, Advanced Disposal, with weekly collections, which does not keep records of recycling volumes.

We recycled 3292 pounds for 2013-14. Since this time, the company has not kept records of recycling volumes.

16. What percentage of your school's total office/classroom paper content is post-consumer material, fiber from forests certified as responsibly managed and/or chlorine-free? 10% Certified Forest Content, 90% Certified Sourcing (Sustainable Forest Initiative)

17. List the types and amounts of hazardous waste generated at your school: None

How is this measured? Had no hazardous waste to dispose for FY2017-18.

How is hazardous waste disposal tracked? Environmental Services ensures that any hazardous waste is disposed of properly according to district policy.

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

Lanier embraces the 5 R's: Reduce, Reuse, Recycle, Resource, and Responsibility. Our club and sponsors have consistently educated our staff and students to demonstrate responsible environmental stewardship daily. Any chemicals brought to school must be approved, either through the specific curriculum dept. for instructional materials, or through our Environmental Services Dept.

18. Which green cleaning custodial standard is used? GCPS does not subscribe to a single green cleaning custodial standard currently. However, the district has implemented many custodial processes and procedures consistent with CIMMS certification guidelines. The limited value added by external certification of those existing processes and procedures does not appear to justify the cost of obtaining the third-party certification.

What percentage of all products is certified? Approximately 37% of custodial cleaning products are Green Seal Certified.

Alternative Transportation

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

How is this data calculated? The data is calculated by our Data Management clerk, the school districts transportation reports and data collected via Synergy.



Students that drive to school 35%, Students that ride the bus 35%, Students that carpool 30%, with some spaces designated for “carpooling”

20. Has your school implemented?

designated carpool parking stalls.

Lanier High School was recognized by DOT’s Georgia Commute Options Program for being the first school in Gwinnett County to have 6 designated parking spaces for “carpooling” teachers and students.

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

Since 2010 we have participated in the Clean Air Campaign “No-Idling program” and the “Ride the Bus” program.

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

Each time we conduct a “surprise patrol” we have shown a reduction in vehicle’s idling. November 27th until December 1st of this year we started a Carpool Week. The students create banners and pledges to educate students about the importance of reducing air pollution by carpooling to school.

22. Describe any innovative programs/technologies, unique practices/policies and impactful partnerships related to this Pillar. Please be sure to highlight any metrics listed above to help describe your school’s creative approach.

The week of November 27th to December 1st, 2018 the students created banners with different slogans such as “Carpool to help combat pollution” “Carpool reduce air pollution”. The students and teachers signed pledges to increase carpooling to help reduce air pollution.

Students surprised some no-idlers with prizes and appreciation. Parents and the school community were made aware of our accomplishments via digital media and internal communication systems.

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

Environmental Health

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

Pest management is provided through the school system’s Environmental Services department, which has provided a comprehensive Integrated Pest management Program since 1990.

The district employees three pest control operators, certified by the state in one or more categories of pest control service, who perform daily services. IPM service is requested through a computerized maintenance management system, which retains all pest control records for a minimum two years in compliance with state regulations.

All kitchens are inspected monthly. School interiors are inspected annually. Fire Ants are managed semiannually with a Spring baiting followed by Fall mound treatments. Other monitoring and inspection is provided on an as-needed basis. Termites are managed on a 15-year retreatment basis, with limited spot treatment of isolated swarms, if needed. Corrective actions involving exclusion measures and landscape modifications are coordinated with the Building



Maintenance and Grounds Maintenance departments. The director, assistant director, and environmentalist specialist of the Environmental Services Department, who oversee the IPM program, are also certified with the state in Industrial, Institutional, structural and Health Related pest control.

2. What is the volume of your annual pesticide use (gal/student/year)? Describe efforts to reduce use:

In FY15, 119 ounces of liquid insecticide and 29 grams of baits were used. District policy- P.EBBB for Integrated Pest Management with specific focus on identifying root causes of pest problems, and seeks to reduce or eliminate by non-chemical means on a case-by-case basis.

In FY16, 14.4 ounces of liquid insecticide and 23 grams of bait, 8 pounds of fire ant bait outdoors.

In FY17, 56.7 ounces of liquid insecticide, 35 grams of bait, 8 pounds of fire ant bait outdoors.

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

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

Our school does not have any fuel burning combustion appliances

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

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

District policy P.EBM. Bringing chemical products into our school is prohibited. Curriculum related products used in science or fine arts require approval of curriculum office. Our school has identified and properly removed sources of elemental mercury and prohibits its purchase and use in the school. Thermostats were changed as part of the Energy Management System.

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

Daily detailing and vacuuming of the facility by custodians continually remove potential allergens from the classroom environment, such as paper dust, and other particulates that might be generated from daily activities, along with mold spores and pet dander that can be brought into the building by occupants each day. The integrated pest management program actively addresses any emerging roach or vermin infestations. Cockroach particulates are another commonly recognized allergen. The pest management program also addresses yellow jackets and fire ants nesting on school grounds, and the sting of either can cause an allergic reaction in some individuals. Humidity is controlled by HVAC systems, and kept below the 65% level necessary for dust mites to thrive, controlling another allergy causing pest.

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

Work order tracking system for reporting moisture problems (leaks, condensation, and excess humidity.) Insulating techniques, along with EMS are used for HVAC and mechanical system to control condensation and humidity. If mold does occur, custodial staff follow district policy to clean and sanitize affected areas.



7. Our school has installed local exhaust systems for major airborne contaminant sources. (X)Yes

Ion Generators

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

All buildings are ventilated to meet ASHRAE standards. Head custodian schedules PMs to maintain optimal performance of equipment. Mason also conducts quarterly filter changes.

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

All GCPS buildings are ventilated to meet ASHRAE standards and monitored 24/7 through a computerized Energy Management System (EMS) for all HVAC and lighting equipment. Building Maintenance schedules PMs to maintain optimal performance of equipment.

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

To maintain and promote superior air quality, the EMS continuously monitors humidity and CO2 levels. Preventive maintenance on HVAC equipment is tracked via a computerized maintenance management system. HVAC air filters are on a routine schedule for replacement.

Nutrition and Fitness

11. Which practices does your school employ to promote nutrition, physical activity and overall school health? Provide specific examples of actions taken for each checked practice, focusing on innovative or unique practices and partnerships.

Yes, our school participates in a Farm to School program to use local, fresh food.

Our school has an on-site food garden.

Our school garden supplies food for our students in the cafeteria, a cooking or garden class or to the community. I received a grant from the Lanier Foundation and we are using it to create a butterfly and garden area. We have also donated one garden bed to our Special Education department as well.

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

Health measures are integrated into assessments. Yes, in Fitnessgram assessments.

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

No, however our CDAT program does work on solar energy projects.

12. Describe the type of outdoor education, exercise and recreation available. Walking and Running on the track.



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

Teachers meet with the Cafeteria staff about nutrition. The Cafeteria also is part of the Nutrition Education and Training (NEAT) program which teaches our students about different health/food related topics and brings the food item for them to try as well. Teachers coordinate the days and class times for them to go to their classes to teach these lessons.

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

14. Does your school use a Coordinated School Health approach or other health-related initiatives to address overall school health issues? (X) Yes

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

The school nurse receives a menu of all foods served with the Carbs noted for the diabetic students.

15. Does your school partner with any postsecondary institutions, businesses, nonprofit organizations, or community groups to support student health and/or safety? (X) Yes

If yes, describe these partnerships:

Our school has many community partners such as the WES Foundation (Leukemia research) in which our students repurpose water bottles into works of art called "Flower Power". The bottle flowers are delivered to cancer patients at local hospitals. Aluminum cans are re-used and serve as the vases for the flower bouquets.

Does your school have a school nurse and/or a school-based health center? (X) Yes

16. Describe your school's efforts to support student mental health and school climate (e.g. anti-bullying programs, peer counseling, etc.): Here are some of the clubs and their programs:

Lanier Student Leadership Team- mentoring to support 9th grade students to transition to high school and they host leadership conferences to improve the school climate.

Beta Club- Peer Counseling and participate in the Gwinnett County Food co op

DECA- focuses on leadership, teamwork, competition and community service

STUCCO- promotes/rewards academic success, achievement and encourages participation in various events around the school for the Longhorn Cup and participate in the fundraising effort for the United Way Campaign.

Leading Ladies-this is a group of young ladies that were recommended by our faculty and staff to work on academics, social, leadership skills, emotional and mental health, behavioral and at-risk students. They have meetings, luncheons, and celebrate progress no matter how small. They have a list of standards to work towards such as Accountability, Gratitude, Education, Service to Others, Be Genuine, Be an Example to Others, Be Grateful to be a Woman, Choose friends that do the right thing, Integrity and Language.

Key Club- also focusing on anti-bullying and helping others.

Gay Straight Alliance- their mission is to work towards a more accepting environment for all people,



regardless of sexual orientation or gender identity through education, support, social action, and advocacy.

Distinguished Gentlemen mentor program- stresses the belief that every male can achieve success. The mission of The Distinguished Gentlemen Mentor Program is to empower young males elementary through high school to take ownership of the success they can achieve through total character development, tutoring and enrichment, and authentic skill building. Distinguished Gentlemen seeks to instill sense of accountability, pride, and integrity; giving them the courage to act on their beliefs, and the fortitude to accomplish greatness.

Red Cross Club- Guided by the fundamental principles of the American Red Cross and its mission to prevent and alleviate human suffering in the face of emergencies by mobilizing the power of volunteers and the generosity of donors the Name of Red Cross Club, will learn, practice and exemplify humanitarian values through mission-related service projects.

Relay of Life- The mission of the Relay for Life team is to raise money, increase awareness, and organize support and service for those affected by cancer, to instill a culture of hope, encouragement, and perseverance within the school and the community

18. Describe any innovative programs/technologies, unique practices/policies and impactful partnerships related to this Pillar. Please be sure to highlight any metrics listed above to help describe your school's creative approach.

Our school partners with the Gwinnett County Food Co-op and with the various clubs they create a school wide contest for the class that collects the most canned foods to receive donuts. Beta club, DECA, STUCCO, Key Club and Relay for Life focus on community involvement and helping others.

In the Gay, Straight Alliance students focus on a "No Place for Hate" Campaign to spread an environment of inclusion, acceptance and understanding of our differences.

Students in the Distinguished Gentlemen mentor program focus on instilling accountability, pride and ownership for students that do not get as much support at home. This program focuses on helping bring up their self-esteem with the guidance counselor as the mentor and giving them classroom help and support when needed.

Students in the Leading Ladies program provide the same support as the distinguished gentlemen but for the females in our school.

Pillar 3: Effective Environmental and Sustainability Education

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

[X] Our school has an environmental or sustainability literacy requirement.

Lanier HS participates in the Green & Healthy Schools program, incorporating environmental sustainability education at each grade level and is aligned to the Common Core. Our rigorous curriculum allows for inquiry-based learning and includes the use of models, investigation, and data analysis. Our teachers provide in-depth exposure to STEM foundations with real world environmental applications.

Several of our student were selected to serve on the county-wide Green Youth Advisory Council (YAC). Sponsored by our nonprofit partner, Gwinnett Clean & Beautiful. Students participate in hands on environmental events and assist in



education and engaging Gwinnett's high school students in local programs and projects that impact local and global environmental challenges. The GYAC helps students develop leadership skills, assist with program design and implementation, collaborate with other youth and county leaders, and promote sustainability, environmental literacy, and civic engagement in their school and community.

Some of our students advanced to the regional science fair competition with their environmentally focused project. For one such project, students designed a buoy that could harness wave power and generate actual current as an alternative power source.

Students conducted water audits and helped create awareness around water conservation by entering a video contest sponsored by the North Georgia Metropolitan Water District.

[X] Environmental and sustainability concepts are integrated throughout the curriculum.

Environmental topics are imbedded in GCPS' Academic Knowledge & Skills (AKS). Students read, write, speak, and utilize technology in learning about the environment. Environmental lessons and projects reflect a cross curricular approach in environmental education. Classroom instruction and labs conducted address many environmental and sustainability concepts such as: waste reduction and recycling, urban agriculture, nutrition and food equity, energy conservation, air quality and pollution, water quality, pollution and conservation, endangered species, biodiversity, habitat conservation, etc. Students are involved in hands-on learning by participating in chemical and biological monitoring of a local stream. We also collaborated with the Upper Chattahoochee Riverkeepers on their Floating Classroom to help test water quality on Lake Lanier, our county's main source for drinking water.

[X] Environmental and sustainability concepts are integrated into assessments.

At Lanier there is an interdisciplinary approach to learning about the environment. Topics are imbedded throughout Gwinnett's Academic Knowledge & Skills and both qualitative and quantitative assessments include environmental topics. On the Science portion of the standardized year-end test, 73% of students performed in the "Meets Standards or Exceeds Standards Range, with 13% exceeding expectations.

Additionally, in Gwinnett County the Gateway written assessment, which is a graduation requirement, measures a student's knowledge and skills related to the Areas of Focus within World History, Biology, Chemistry, and Language Arts. On the Science portion of the Gateway written assessment, 76% performed the "Meets Standards" while 14% Exceeded the expectations.

[X] Students evidence high levels of proficiency in these assessments.

Many of the assessments are an important part of the curriculum and required labs for the AP Environmental Science curriculum. The students score well on the classroom assessments, such as quizzes, labs, tests, projects and on the AP exam. Free Response Questions from past College Board AP Exams are given to the students and teachers help to review each concept/topic with the students.

[X] Professional development in environmental and sustainability education are provided to all teachers.

All teachers receive year-round staff development delivered by various local school and district specialists on a variety of environmentally-based STEM lessons. Teachers collaborate on teaching and learning and seek innovative ideas and practices in science. Two of our teachers also serve on the Green & Healthy School's Steering Committee and attends



environmental education trainings twice a year. The information gleaned at these trainings are then shared with our staff. Our school sponsors an environmental club and we are committed to raising awareness of environmental issues, with community service projects and activities. Our ultimate goal is to educate, collaborate, and share best practices with other schools, organizations, universities, corporations and government.

Teachers are provided timely information on food recalls, smog alerts, recycling opportunities, etc. Our staff participates in hands-on learning alongside our students in many of the environmental community events such as: Mill Creek Nature Center Clean-up, Garden day, Our Adopted Stream clean-up day, Great America Cleanup, Great Gwinnett Wetlands, Christmas Tree Recycling, Carpool Awareness Week, Refill not Landfill Awareness Week and Earth Week events.

Teachers are also encouraged to attend staff development learning opportunities being offered, such as, Georgia Tech Science day, Project WET, Project WILD and Project Tree classes. Gwinnett Environmental and Heritage Center also offers Environmental learning opportunities for teachers and the public. Additionally, every year teachers can attend AP training for their curriculum.

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: ~6% Percentage scoring a 3 or higher: 66%

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?

Lanier High School is an Academy School and we offer a Life and Health Science Academy as an Environmental Science pathway. Students are actively involved with the school's Learning Gardens and conduct local stream monitoring. Community experts in various STEM fields speak to students and offer the real-world connection to what they are learning, as well as provide inspiration for pursuing careers in the Environmental arena. Some of our community partners/speakers include:

- ♻️ Department of Water Resources with Gwinnett County which bring an Enviroscope Model and discuss the importance of water conservation and possible careers available.
- ♻️ Elachee Nature Center had 2 naturalists teach my students about the stream ecosystem, how to take water samples and catch invertebrates. The water samples are tested, and each macro-invertebrate is collected, separated and the stream health is determined. My students follow up this lab with a lab report to interpret the data, create a Shannon Diversity Index discuss water pollution issues and possible solutions.
- ♻️ Georgia Mineral Society discuss the geology of Georgia, bring rock samples and learn the importance they play in groundwater and fault boundaries.
- ♻️ Georgia Department of Soil and Water Conservation discuss potential careers in conservation.
- ♻️ Humane Educator with Ethical Choices program, for the Agriculture and Nutrition Unit. Topics include The Environment and Modern Agriculture, Healthful Eating, Factory Farming and The Ethics of Eating.
- ♻️ Georgia Department of Natural Resources will bring birds of prey for students to see up close and discuss their role in our ecosystem and the effects humans play in their survival.



- ♻️ Georgia Power Company to have the students conduct a Home Energy Audit learn about energy conservation and both non-renewable and renewable energy sources.
- ♻️ Upper Chattahoochee Riverkeepers
- ♻️ https://youtu.be/vQOD6FY-a_E
- ♻️ https://youtu.be/_mK3IRD-ILk
- ♻️ <http://www.esenetworks.com/page.aspx?id=5703&page-id=44898>
- ♻️ <https://www.youtube.com/watch?v=ucXM-WyVtBM>
- ♻️ <https://www.emaze.com/@AZTOLFFO/growing-leaders-gcb>

Lanier High School also has another pathway the Center for Design and Technology (CDAT). In both pathways students have an opportunity to do Work Based Learning, Dual Enrollment and Internships. CDAT students have also worked on Solar Energy projects. There is also an Engineering component with CDAT and we were excited to see students “reuse materials” to design and engineer a model of a prosthetic leg. Talk about real world application!

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

Lanier teachers provide in-depth exposure and inquiry experiences for every student. Career pathways are embedded into the curriculum and across all content areas. Community experts are secured as speakers at school wide events such as: Georgia Dept. of Natural Resources with Birds of prey discussing environmental awareness, Georgia Power discussing responsible energy use, Brenda O. McDaniel, Environmental Education Manager discussing community service projects and Sugar Hill Maker Fest with CDAT in April all clubs are encouraged to participate, such as, our Environmental Club.

Since we are an Academy School, students have the opportunity to participate in work-based learning, dual enrollment and internships, such as provided by John’s Creek Environmental Campus wastewater treatment plant and other community partners.

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

Throughout the year our students are encouraged to participate in community service opportunities that impact our school and our local community. Students learn to take an active role in their learning.

- ♻️ To help reduce water pollution and provide real-time data to Water Resources, students conduct Adopt-A-Stream monitoring for both biological and chemical changes.
- ♻️ To help provide locally grown, nutritious foods, students help plant and harvest in our school Learning Gardens, students can take it home and/or donate to the local North Gwinnett COOP.
- ♻️ To help protect our waterways, students volunteer at the Mill Creek Nature Center to help pull invasive species, such as Chinese privet, that clog our waterways. “Great Gwinnett Wetlands” Clean-up every year.



- ♻️ To help reduce waste on our campus, water bottles and aluminum cans are repurposed through the Flower Power Program. We dedicate a week for “Refill Not Landfill” Campaign to educate the students and faculty about re-using a water bottle instead of purchasing new and adding to the waste stream.
- ♻️ To help children understand where their food comes from, our high school students educated elementary aged children and taught them to plant their own seeds/food in our Winter Bazaar and in the Sugar Hill Maker Fest with CDAT.
- ♻️ To help reduce the amount of illegal dumping of Christmas Trees, students participated in the “Bring One for the Chipper” event to help chip trees into mulch that was then utilized at county parks.
- ♻️ To help reduce the amount of textiles being landfilled students help collect and sort clothing to donate to the AGAPAO not for profit organization which collects clothing for a children’s orphanage in India.
- ♻️ To help reduce the number of books that end up in landfills students help collect gently used books and participate in the Gwinnett Clean & Beautiful “Great American Clean-up” to donate them to children of all ages to different organizations every year.

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

Efforts have included school wide initiatives in which students, with their teachers, participated in PBL learning related to the environment.

In question 1 of Pillar 3 here are some lab activities that I conduct either in our school garden or our adopted stream area:

- ♻️ Students learn how pesticides and fertilizers affect insect biodiversity and organisms in our stream and what remediation could be done to reduce this impact.
- ♻️ Students conduct ozone testing, and air particulates testing and how to use living algal/fungus called a lichen to determine our air quality. We compare that to the county’s ozone and particulates result.
- ♻️ Students determine how the age of the vehicle determines how much pollutant is released and how this affects emission standards and asthma rates.
- ♻️ Students conduct water monitoring at our adopted school stream and in the field trip to Lake Lanier with Chattahoochee River keepers, to study real world data and effects of water pollution on health effects of the organisms that live in the stream or on land, including ourselves.
- ♻️ Students learn the long-term effects of trash accumulating on the ground, what really decomposes and how this affects organisms on land.
- ♻️ Students in the field trip to Johns Creek Environmental Campus Wastewater Treatment plant, learn how we affect the waste that enters the plant and exactly how our water is rendered safe for human consumption.
- ♻️ Students in the field trip to Rancho Alegre student learn about a working farm using organic methods, the important part bees play in our environment and living sustainably.
- ♻️ Twice a year, students participate in preparing the garden for both Fall and Spring planting and the upkeep of maintaining our garden.



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

- ♻️ Students conduct ozone testing, and air particulates testing and how to use living algal/fungus called a lichen to determine our air quality. We compare that to the county's ozone and particulates result. Students determine how the age of the vehicle determines how much pollutant is released and how this affects emission standards and asthma rates.

Both of these activities are combined with our "Carpool Awareness Week". We send out in our school newsletters with are sent out to the school community about reducing air pollution. How carpooling is one way to do this and thus the impact of asthma as well.

- ♻️ Students learn the long-term effects of trash accumulating on the ground, what really decomposes and how this affects organisms on land.

The trash decomposition study is incorporated in our "Refill not Landfill" campaign which students educate students and faculty about re-using water bottles instead of contributing to the trash buildup. How this affects air and water pollution.

Additionally, our Academy partners with the WES Foundation (Leukemia research) in which are students repurpose both plastic water bottles and aluminum cans and convert them into art in the form of flowers. The students are able to donate them to cancer patients at local hospitals.

- ♻️ Students conducted water audits at our local stream and helped create awareness around water conservation by entering a video contest sponsored by the North Georgia Metropolitan Water District. We communicate the results throughout our community from our school e-newsletter.

Several of our students were selected to serve on the county-wide Green Youth Advisory Council (GYAC), sponsored by our nonprofit partner, Gwinnett Clean & Beautiful. Students participate in hands-on environmental events and assist in educating and engaging Gwinnett's high school students in local programs and projects that impact local and global environmental challenges. The GYAC helps students develop leadership skills, assist with program design and implementation, collaborate with other youth and county leaders, and promote sustainability, environmental literacy, and civic engagement in their school and community.

The students are involved in numerous community events throughout the year while representing our school cluster and high school.

- ♻️ Once we grow some vegetables in our school garden we donate them to our students at our school. The students also learn about organic planting, the difference in health benefits for us and the environment. Students can take the vegetables home and/or donate to the North Gwinnett Coop.

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.

Schelly Marlatt, Executive Director and President of GC & B and Brenda McDaniel, Education Director with GC&B: As the Environmental Club sponsor we participate in the Great American Clean-up challenge, Tree chipper event, Great Gwinnett Wetlands and Stream clean-ups.

Students have been participating in the "Great American Clean-up" Challenge since 2012. In 2012 the students were able to collect 275 gently used books that would have ended up in the landfill to children in our local cluster. However, last



year we collected 732 books and donated them to “The Path Project”. This project is a community development organization working with at-risk children in areas where most of them do not graduate from high school. A trailer is placed in one of our neighborhoods and is converted into a small classroom/after school tutoring, homework help, camps and clubs and a variety of other social development programs and activities. We were one of the first to contribute books for this wonderful program that started last year, that will be a positive contribution for our local kids.

- ♻️ Students participated in the “Bring One for the Chipper” event where 7,000 Christmas trees were mulched for local parks that would have otherwise ended up in the landfill.
- ♻️ Students participated in the “Great Gwinnett Wetlands” and helped pick up 3,320 pounds of trash and remove close to 2,400 pounds in an invasive species, Chinese privet.

Erin McGehee and Melissa Nikolic with Georgia Commute Options “No-Idling/Carpool/Ride the Bus”.

- ♻️ We are the first high school in Gwinnett County to have “Carpool Parking spots”. We have six spots with the help of GA Commute Options.
- ♻️ Hank Ohme Program Manager Mill Creek Nature Center Georgia Wildlife Federation River Alive Clean ups

Cora Keber Education Coordinator of the State Botanical Garden of Georgia at University of Georgia. Heather Alley SBG Conservation Horticulturist provide free plants for our butterfly garden.

- ♻️ The State Botanical Garden provided us with 21 varieties of plants for our school to start our Butterfly garden. We participated in the “Connect to Protect” program at the State Botanical Garden of UGA which supports schools in starting a pollinator garden using native species.

Cheryl McClellan Program Manager Education & Public Outreach North Fulton County Water Reclamation Facilities: *Johns Creek Environmental Campus* Waste water treatment Plant.

Students go to the facility in a field trip with Environmental Science. Students learn real world applications of the process it takes to maintain our drinking water. They also get exposed to opportunities in an internship where they can shadow actual operators and gain an understanding of the fundamental of the water & wastewater treatment process.

Mr. Steve Edwards, Mayor and Mr. Brandon Hembree, Mayor Pro Tempore with the City of Sugar Hill

- ♻️ Students had the opportunity to participate in the Downtown clean-up of Sugar Hill. Additionally, Mr. Edwards is the owner of Advanced Disposal and the business we use for recycling paper at our school.

Sarah Skinner with Principal Education and Outreach Specialist Metropolitan North Georgia Water Planning District “Video Contest”

Jordan Girard Public Education Intern with Gwinnett County Dept of Water Resources brought Enviroscape Model and was a guest speaker.

- ♻️ Students in Environmental Science conduct adopt a stream monitoring for both biological and chemical changes in our adopted school stream.



- ♻️ Guest speakers from the Dept. of Water Resources come to teach our students how they can conserve water and how our decisions can make a difference. Students demonstrate real world experience and work as a team to create a PBL video project about conserving water in “Every Drop Counts”.

Mr. Waggener, Georgia Mineral Society: He teaches a lesson on plate tectonics and mineral identification and mining in Georgia to my Environmental Science students every year.

- ♻️ Students learn the importance of mineral identification in Georgia and how each mineral is used in the construction of products that we use in our everyday lives.

Janice Jones Program Registrar with Elachee Nature Center.

- ♻️ Students compare their previous stream monitoring water samples with current samples taken with the direction of naturalists from Elachee Nature Center. The students also use nets to collect macro-invertebrates in the stream and separate them, count and determine the health of the stream. Students learn how the decisions they make can make a difference.

Peter Griffin, Dept. of Natural Resources educator with the Charlie Elliott Wildlife Center.

- ♻️ Students are able to see the effects human can have by learning of the plight of some rescued birds of prey that he brings to class. They learn how important their role is in the ecosystem and teaches them real world issues that can affect the future of our local wild life and how our decisions can make a difference.

Alan Morris, Founder AGAPAO Organization.

- ♻️ Students collect clothes that would otherwise end up in landfills. Students collect, sort and package clothing to be sent to an orphanage in India. Students learn real world examples of how their gently used clothing would make a difference in the lives of children who are not as fortunate as them.

Jill Pennamon, Educator with Georgia Power Company.

- ♻️ Students learn to conduct a real energy audit to learn ways that energy is wasted and ways to conserve energy.

11. Describe any innovative programs/technologies, unique practices/policies and impactful partnerships related to this Pillar. Please be sure to highlight any metrics listed above to help describe your school’s creative approach.

Authentic learning is an important aspect of Environmental Science. It is my belief that with the real-world applications, in class, field trips, guest speakers and opportunities afforded to our students that they truly appreciate and understand the important part they play in our world. This generation is going to make the difference in our future and it’s important as teachers to guide them to learn to make the decision for themselves.