



Dr. John D. Barge, State School Superintendent
“Making Education Work for All Georgians”

Arcado Elementary School’s philosophy on environmental education has followed that of Mother Teresa, “No great deed, but small deeds with great love”. The school’s environmental education committee has worked closely with students, teachers, and the PTA since its inception in the early 1990s proving the program’s sustainability and viability. Each year the number of applicants for the school’s Green Team at the fourth grade level continues to grow. In 2013-14 school year 70 fourth graders completed applications for 25 positions on the school’s coveted Green Team. “Planting the seeds” of environmental protection and care ensures the future of our community through the numerous “small tasks” completed by the school’s Green Team each week. Some of the “small steps” taken to reduce the ecological footprint include not only recycling classroom paper, but cardboard, aluminum cans, plastic bottles, ink jet cartridges, plastic six-pack rings, cell phones, lap tops, and tablets.

One particular part of our recycling efforts has personally touched a teacher at our school and her family. Pop-tops from aluminum cans are collected for the local Ronald McDonald House affiliated with Egleston Children’s Hospital in Atlanta. Arcado strongly believes in children reaching out to help other children. One plastic milk jug filled with aluminum can pop-tops is equal to one night’s stay for a family of a sick child at the Ronald McDonald House. One of Arcado’s own teachers had to spend the summer in Baltimore with her son who has a rare disease, Neurofibromatosis. Thanks to the Ronald McDonald House she was able to stay throughout the summer without adding to the burden of her already strapped finances due to medical costs. She was so grateful for the help and kindness extended through that organization. Students and the community realized such a “small deed” of recycling aluminum can pop-tops can have a huge impact not only on the environment, but on the lives of people in our own community. We collect approximately 40 pounds of pop-tops each year.

Arcado has had its share of challenges as well. When there was no local company available to collect plastic bottles, parents volunteered to take plastic bottles recycled in the school cafeteria and throughout the building to their home recycling bin each week. Even the custodian includes some of the plastic bottles used in his department. Recycling and reducing our carbon footprint permeate the culture at Arcado.

One of the school’s greatest challenges occurred in 2002 when the school received a new addition; the contractors accidentally destroyed the school’s natural habitat used for outdoor education. The school grounds went from housing a wooded habitat for hands-on environmental education to a heap of

Georgia Red Clay and totally barren land. Flora and fauna were virtually nonexistent in this section of the school's campus. Arcado's Environmental Committee comprised of teachers, parents, and administrator pulled together to work for the common goal of providing a location for an outdoor classroom. Through awards and grants such as "The Ugliest School Yard" award and the Weyerhaeuser Giving Fund Award. The school was able to transform this very barren land into our current thriving outdoor classroom used by students at all grade levels to enhance their environmental science education. Ninety-nine percent of all the plants are Georgia natives. Master gardeners have voluntarily consulted with the Environmental Committee to provide xeriscaping to reduce the amount of water necessary. Former students built an outdoor amphitheater for their Eagle Scout projects. Several raised beds allow students to plant seeds, monitor, and maintain plant growth. The herb and spice section of the outdoor classroom has become famous as mint, rosemary, and thyme have been harvested by students and given as a gift to school guests. The mint has been used in mint tea and served at local and county functions as well as to the state and county superintendent at the reception for Gwinnett County's National Green Ribbon School Award. The outdoor classroom is also the setting for a research project by kindergarteners in the "Ecology Garden". The kindergartners bring items to bury in their Ecology Garden in the fall. On Earth Day they dig up the items to see which buried items are biodegradable. This "small act" provides huge impressions on young minds, setting the stage for a school wide culture that promotes a recurring theme of protecting the earth. Pumpkins and watermelons are some of the other crops grown and harvested in the outdoor classroom. Coffee grounds, egg shells, and apple cores are all used in the school's compost pile. Many "tiny steps" strung together in the outdoor classroom reduce the carbon footprint and have turned the Outdoor Classroom site from barren land into one of the focal points of our school.

School Name: **Arcado Elementary School**

District Name: **Gwinnett County Public Schools**

Principal Name: **Penny Palmer Young**

Address: **5150 Arcado Road, Lilburn, GA 30047**

Lead Applicant Name: **Penny Palmer Young**

Lead Applicant Email Address: **penny_young@gwinnett.k12.ga.us**

Lead Applicant Phone Number: **770-925-2100**

School Information

How would you describe your school: Suburban

Does your school serve 40% or more students from disadvantage households? Yes

% receiving FRPL: 51%

% limited English proficient: 31%

School Type: Public

Level: Elementary

Total Enrolled: 1186

Attendance Rate: 96.8%

Is your school participating in a local, state or national school program which asks you to benchmark progress in some fashion in any or all of the Pillars? Yes

Gwinnett Clean & Beautiful- Green & Healthy Schools-Reaching Higher School (Top Level, 2006-present) and Sustaining Excellence in Environmental Education (6 consecutive years as a Reaching Higher School, 2012)

Georgia Department of Transportation- Clean Air School Anti-Idling Campaign- Data reports that Arcado ES has reduced anti-idling by 38%, Georgia Walk To School (Annually in March), and International Walk To School (Annually in October), Safe Routes to School (2009-Present),

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

Weyerhaeuser Excellence in Recycling Award, 2007.

Winner of the Ugly Schoolyard Contest, sponsored by the Outdoor Classroom Council of the Environmental Education Alliance of Georgia, 2007.

Lowes Toolbox for Education Award, 2007-08.

Georgia Recycling Coalition Outstanding School of the Year, 2010.

Northeast Georgia Region Partner of the Year Award (2012-2013) & The Golden Shoe Award (2012-2013) sponsored by the Georgia Department of Transportation- Georgia Safe Routes to School

Gwinnett Clean & Beautiful- Spirit of Green Award, Reaching Higher School Green & Healthy Schools (Top Level 2006-present)

Certifications:

National Wildlife Federation, certified habitat

Monarchs Across Georgia, certified pollinator garden

Pillar I: Reduced Environmental Impact and Costs

Q3: Energy A. Can your school demonstrate a reduction in Greenhouse Gas emissions? Yes

A2. Percentage reduction: Meet district, county and state guidelines

A3. Over (m/yy - m/yy): 9/2012-9/2013

A4. Initial GHG emissions rate (MT eCO₂/person): 547.8

A5. Final GHG emissions rate (MT eCO₂/person): 532.1

A6. Offsets:

A7. How did you calculate the reduction? School district data.

B. Has your school received EPA ENERGY STAR certification or does it meet the requirements for ENERGY STAR certification? Yes, Arcado ES received an ENERGY STAR score of 91 (Sept. 2013).

C1. Has your school reduced its total non-transportation energy use from an initial baseline? Yes

C2. Current energy usage (kBtu/student/year): Information not available at this time

C3. Current energy usage (kBtu/sq. ft./year): Information not available at this time

C4. C4. Percentage reduction: Information not available at this time

C5. . Over (m/yy - mm/yy): Information not available at this time

C6. How did you document this reduction? School district data.

D. What percentage of your school's energy is obtained from: Information not available at this time

D1. On-site renewable energy generation: Information not available at this time

D2. Type Information not available at this time

D3. Purchased renewable energy: Information not available at this time

D4. Type Information not available at this time

D5. Participation in USDA Fuel for Schools, DOE Wind for Schools or other federal or state school energy program:

E1. In what year was your school originally constructed? 1981

E2. What is the total building area of your school? 69,444 square feet

F. Has your school constructed or renovated building(s) in the past ten years? Yes

F2. For new building(s): Percentage building area that meets green building standards: Information not available at this time

F3. Certification and level: Information not available at this time

F4. Total constructed area: 101,800 square feet

F5. For renovated building(s): Percentage of the building area that meets green building standards:
Information not available at this time

F6. Certification and level: Information not available at this time

F7. Total renovated area: 32,356 square feet

4: Water and Grounds Information not available at this time

A. Describe alternate water sources used for irrigation. To conserve water used for irrigation and maintenance of school grounds, our district practices xeriscape landscaping. The limited irrigation and conservative landscaping practices help insure that minimal amounts of water are necessary to maintain landscaping and school grounds. Outside faucets are secured to avoid unauthorized water use.

B. Describe any efforts to reduce storm water runoff and/or reduce impermeable surfaces. Multiple outdoor learning areas have been created at Arcado. The plantings are designed to educate as well as help reduce runoff. Xeriscaping is practiced where applicable. The limited irrigation and conservative landscaping practices help insure that minimal amounts of water are necessary to maintain landscaping and school grounds. To fight erosion in our outdoor classroom, plants, mulch, gravel, and grasses planted around the storm drain impedes erosion. In addition, stones and erosion fences reduce storm water.

C. Our school's drinking water comes from: Municipal Water Source

D. Describe how the water source is protected from potential contaminants. The Gwinnett County Water and Sewerage Authority continuously monitor organic and inorganic contaminants in our water sources.

E. Describe the program you have in place to control lead in drinking water. The Gwinnett County Water and Sewerage Authority continuously monitor organic and inorganic contaminants in our water sources.

F. What percentage of the school grounds are devoted to ecologically beneficial uses? Five percent of the school grounds are devoted to ecologically beneficial uses. 99% of plants in our outdoor classroom are native plants. Our classroom includes a bog garden, compost area, herb garden that provides nectar to bees and butterflies and berries for birds. On school grounds, we also have a butterfly garden, bottle cap garden, and the original Oak Tree area that is fenced off for protection.

5: Waste

A. 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.

A1. Monthly garbage service in cubic yards (garbage dumpster size(s) x number of collections per month x percentage full when emptied or collected): 14,000 cubic yards

A2. Monthly recycling volume in cubic yards (recycling dumpster sizes(s) x number of collections per month x percentage full when emptied or collected): 168 cubic yards for paper & 336 cubic yards for cardboard= 504 cubic yards

A3. 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): 1 cubic yard
Compostable materials are not collected in a dumpster. Our current school program consists of the Green Team weekly composting. A unique feature is that we compost coffee grounds from our staff coffee pots. Our community master gardener provides consulting and donates field time.

A4. Recycling Rate = $((B + C) \div (A + B + C) \times 100)$: 3.48

A5. Monthly waste generated per person = $(A/\text{number of students and staff})$: 10.7 cubic yards

B. 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%

C. List the types and amounts of hazardous waste generated at your school: Photo chemicals, art supplies, oil, anti-freeze, fluorescent lamps, batteries, paints, solvents, and medical waste. GCPS Environmental Services conducts annual hazardous waste removal/disposal at each school, which helps insure that chemicals are disposed of properly.

D1. Which green cleaning custodial standard is used? The school system is currently testing "green" cleaning supplies for future use.

D2. What percentage of all products is certified? Most chemicals used in GCPS' custodial program have low- to zero-hazard ratings. Those projects that use more caustic chemicals are left for summer when fewer staff and students are in the buildings.

D3. What specific third party certified green cleaning product standard does your school use? All custodial chemicals are specified by GCPS and purchased through the GCPS warehouse, which insures that all chemicals are keeping with district policies and procedures.

E. Describe other measures taken to reduce solid waste and eliminate hazardous waste. Arcado embraces the 4 R's: Reduce, Reuse, Recycle, Rethink! Through collaboration and creative partnerships, Arcado has been able to significantly reduce solid waste production through the actions of our students, faculty, and staff in a way that has not distracted from the purpose of our schools. Some of our waste reduction practices include: announcements being posted or emailed rather than duplicated for distribution, a one copy rule utilized in Computer Lab and Media Center, teachers swap and share unused supplies. This is especially helpful when teachers are new or changing grade levels, students and

teachers are encouraged to bring reusable lunch containers and to use reusable utensils, school store sells recycled items, & extensive recycling program is in place. Arcado partners with several nonprofit and community organizations to enhance student learning focused on building students who are strong environmental stewards. Agencies include: Gwinnett Clean & Beautiful, Georgia Dept. of Transportation Safe Routes to Schools, The Clean Air Campaign, and The Gwinnett Environmental & Heritage Center. Our school has a "Green Team" comprised of 4th grade students. Students must demonstrate strong leadership skills and complete an essay for consideration in the Green Team. This group of students assist the school with environmental programming throughout the school year. In addition to our student green team our school has an active environmental committee, comprised of teachers, PTA members, custodial staff & administrators, that is involved in waste reduction and recycling programming. This is responsible for most program components, including setting long-range sustainability plans. Members of this committee provide educational pieces and action opportunities to students, teachers, parents, and community members. Faculty members & students share water & energy conservation tips, as well as waste reduction tips via weekly electronic faculty newsletter and student led and broadcasted morning news show.

6: Alternative Transportation

A. 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) How is this data calculated? 93%; Student Information System calculates our data. $12 \text{ walkers/bike riders} + 1126 \text{ bus riders} + 42 \text{ 2+ carpool} / 1180 \text{ students} = 93\%$

B. Has your school implemented?

B1. Designated carpool parking stalls? Arcado does not have parking stalls but we have a designated carpool line.

B2. A well-publicized no idling policy that applies to all vehicles (including school buses)? Yes. As part of our involvement with the Clean Air Schools Anti-Idling Campaign, we have signage around the campus. We monitor and collect data on idling throughout the school year.

B3. Vehicle loading/unloading areas are at least 25 feet from building air intakes, doors, and windows? Yes

B4. Safe Pedestrian Routes to school or Safe Routes to School? Yes

B5. Describe any other efforts toward reducing environmental impact, focusing on innovative or unique practices and partnerships. Students are encouraged to ride the bus. We currently have 85% of our students utilizing school buses. Bus drivers turn off their engines when dropping off or waiting for students; however a few exceptions exist due to students with special needs. Our school participates in The Clean Air Campaign's "No Idling Program." This program encourages parent drivers to turn off their engines when dropping off or waiting for students, thus decreasing harmful emissions and creating a healthier school environment. In-ground signage and educational materials are presented to all parents

at the beginning of each school year. Several times a year, the "Green Team" members will "surprise" drivers who are not idling, with a pencil, pen, notepad, or raffle ticket as a thank you for supporting our no idling campaign, this project reinforces and sustains the school's no idling policy. Baseline data shows an idling rate of 13.2%. The most recent data collected shows a 8.1% idling rate. The Clean Air Campaign current Arcado data states that we have reduced idling by 38% since we began collecting and submitting our data. Students and staff participate annual in Georgia's Walk to School Day and the International Walk to School Day. We are a "Gold Level Member" in the GA DOT "Safe Routes to Schools" Program. We offer instruction in air quality and air pollution prevention for the entire student body. Smog alerts are announced via email in the spring. Our school encourages walking, biking, or carpooling for students and staff.

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

Arcado is proud that our district was the 1st school district in North America to buy LEV diesel engines, with about two-thirds (1,100 units) of today's fleet using the emissions-reducing engines, and all vehicles over 1/2 ton are diesel. Furthermore, all vehicles use ultralow sulfur diesel fuel (clean diesel). Currently, there is a project underway to install diesel oxidation catalyst mufflers on 837 buses. This project is funded by CMAQ grant from GA DOT through GA EPD. All school buses undergo regular maintenance with the district. A filter crusher drains 95% of excess oil and sludge from filter elements, leaving only non-hazardous waste and crushing the filter to just a quarter or less of its original size. Recycled tires are chipped into pellets for use as alternate paving material in lots and driveways. GCPS also recycles vehicle batteries.

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

Pillar 2: Improve the Health and Wellness of Students and Staff

Q7: Environmental Health

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

P.EBBB Integrated Pest Management: Pesticides will not be used indiscriminately. When controlling pest populations, all reasonable control methods, both chemical and non-chemical, must be considered and used as appropriate to achieve the above objectives. In compliance with the principles of IPM:

- A. Pesticides will not be used if the pest problem can be effectively and economically controlled through non-chemical means.
- B. When pesticides are deemed necessary and appropriate:
 - 1. The least toxic and least amount of chemical that will effectively control the pest will be used.
 - 2. Use low or non-volatile materials, such as baits, and apply in protected locations, such as cracks and small voids, when appropriate and effective.

3. When feasible, pesticide shall be applied when occupants (students, staff and other employees) are not present, such as afternoons when school is out, during school holidays, etc., to reduce the potential for pesticide/people contact.

B. 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.

P.EBM In order to maintain a safe school environment, Gwinnett County Public School (GCPS) employees are prohibited from bringing chemical products into a GCPS facility for the purpose of cleaning, air freshening, or other non-curriculum related uses. This includes, but is not limited to household cleaners, commercial cleaners, air fresheners, etc.

Pesticides shall not be brought into the system per GCPS Procedure.

Biohazardous and medical waste from school clinics will be handled in accordance with GCPS Procedure JGC.

A copy of a Material Safety Data Sheet (MSDS) for any GCPS authorized chemical product, whether curriculum or non-curriculum based, must be accessible on-site for easy reference.

Curriculum related chemical products used in science, fine arts or technical education require the approval of the applicable curriculum office. Each of these offices will maintain a list of chemicals approved for use and the maximum amount of each that may be inventoried in each school. Any chemicals not on these lists will require approval by the appropriate curriculum director or designee prior to purchase/use.

Products should be kept in the original labeled container. If a chemical or art material is transferred to a secondary container, the secondary container must be labeled to (a) identify the content, (b) provide safety/precaution information and (c) provide directions of use.

GCPS employees are required to follow all safe use instructions for any chemical product that is used in a GCPS facility. Additionally, proper disposal and documentation of all hazardous materials e.g. photo chemicals, art supplies, oil, anti-freeze, fluorescent lamps, batteries, paints, solvents, medical waste, etc. are the responsibility of the end user. All disposal receipts/documentation should be maintained by the end user in accordance with applicable governmental regulations. Additionally, Principals or their designees are to provide notification when a hazardous material is disposed of, including the material name, the quantity (weight or volume) and the date of the disposal. These notifications are to be sent via email to the GCPS Environmental Specialist in the Environmental & Supply Services Department. The disposal/documentation of Science lab chemicals will continue to be coordinated annually between the school Science Coordinator and the Department of Environmental & Supply Services.

No GCPS facility should accept any chemical product donations unless prior approval is obtained from the Department of Environmental & Supply Services.

This procedure is intended to inform employees of the prohibition on unauthorized chemicals and to heighten awareness concerning the use and storage of authorized chemical products in a GCPS facility.

It is recommended that site managers notify their employees of this procedure annually.

B1. Our school prohibits smoking on campus and in public school buses. Yes

B2. Our school has identified and properly removed sources of elemental mercury and prohibits its purchase and use in the school. Yes

B3. Our school uses fuel burning appliances and has taken steps to protect occupants from carbon monoxide (CO) No

B4. Our school does not have any fuel burning combustion appliances. Yes

B5. 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.

Gwinnett County Public Schools participated in a nationwide radon test program for the Environmental Protection Agency in 1989. We were one of three school systems in the Southeast to be selected. The results of our testing confirmed that our construction design effectively mitigated any radon that was present.

Radon is a gas produced from the material breakdown of uranium. Outdoors, radon is diluted to insignificant levels posing no health threat. Indoors, however, radon exposure can increase the risk of lung cancer. Indoor levels depend on the building construction and the concentration of radon in the underlying soil.

Our facilities are constructed on a concrete, nonporous slab. This slab contains a substantial vapor barrier and is placed over a compacted soil base which acts as an additional barrier. This construction technique is far superior to that used in residential construction where many houses have a crawl space with no vapor barrier and a wood (porous) floor. Some homes contain basements with block walls which also are made of porous materials allowing for infiltration by radon gas.

Our facilities also have a forced ventilation HVAC system which constantly exhausts air to the outside of the building and replenishes it with fresh air. This constant air exchange would not allow for an accumulation of radon, thus radon would be diluted indoors in the same manner as it is in the outdoor air. The typical home does not exhaust air to the outside by its HVAC system, but recycles the air, thereby increasing the possibility of radon exposure.

In summary, our facilities provide a double protection against radon far superior to existing residential houses. After conducting tests with the U.S. Environmental Protection Agency, we find no basis of concern for the safety of our students with respect

B6. Our school has identified any wood playground or other structures that contain chromate copper arsenate and has taken steps to eliminate exposure. We do have wood playground structures.

C. Describe how your school controls and manages chemicals routinely used in the school to minimize

student and staff exposure.

Arcado/GCPS follows procedures to make sure electric, not gas-powered tools are in use, and crews avoid mowing and painting on smog-alert days. GCPS painters use hand rollers or brushes. Arcado follows the district's comprehensive integrated pest management (IPM) Program. The IPM program uses information on the life cycles of pests and their interaction with the environment. This information, in combination with available pest control methods, is used to manage pests by the most economical, and least hazardous to people and the environment.

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

Teachers are provided with air quality lesson plans for all grade levels, as well as informational materials that address air quality, air pollution, and transportation solutions.

E. 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.

To maintain and promote superior air quality, the energy management system continuously monitors humidity and CO2 levels. All buildings are ventilated to meet ASHRAE standards. Moisture is removed through a desiccant/mechanical process along with a dehumidification control sequence as necessary. The water quality in all cooling towers is tested/monitored monthly to promote optimal performance. All of these features help support an environment focused on the health of all the stakeholders.

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

G. 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. To encourage optimal performance, preventive maintenance on all HVAC equipment is scheduled and tracked via a computerized maintenance management system. Additionally, HVAC air filters are on a routine schedule for replacement.

H. 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.

Our buildings are ventilated to meet ASHRAE standards.

I. 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 energy management system continuously monitors humidity and CO2 levels. All buildings are ventilated to meet ASHRAE standards. Preventive

maintenance on all HVAC equipment is scheduled and tracked via a computerized maintenance management system. Additionally, HVAC air filters are on a routine schedule for replacement.

8: Nutrition and Fitness

A. 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.

A1. Our school participates in the USDA's HealthierUS School Challenge. Level and year: Yes

A2. Our school participates in a Farm to School program to use local, fresh food. Yes

A3. Our school has an on-site food garden. Yes

A4. Our school garden supplies food for our students in the cafeteria, a cooking or garden class or to the community. Yes; In addition to herbs and vegetables harvested from our garden for students to enjoy, our school also participates in the "Farm to School" program, which helps to provide healthy and nutritious food to our students while also providing local farmers with consistent and dependable outlets for their products. All students are given a chance to experience locally grown fresh and nutritious produce. Students also had the opportunity recently to harvest mint and make mint tea to serve to visitors to our school.

A5. Our students spent at least 120 minutes per week over the past year in school supervised physical education. Yes

A6. At least 50% of our students' annual physical education takes place outdoors. Yes

A7. Health measures are integrated into assessments. Yes; Our Physical Education Dept. conducts physical fitness examinations and distributes results of "Fitness Gram" to families.

A8. At least 50% of our students have participated in the EPA's Sunwise (or equivalent program). No

A9. Food purchased by our school is certified as "environmentally preferable". Arcado adheres to federal nutrition guidelines for school meals, ensuring that meals offered are healthy, well-balanced and provide students the nutrition they need to grow and develop. Our School participates in the "Farm to School" program, which helps to provide healthy and nutritious food to our students while also providing local farmers with consistent and dependable outlets for their products.

A10. Percentage: 100

A11. Type: Fruits & Vegetables

B. Describe the type of outdoor education, exercise and recreation available. In addition to previously mentioned outdoor learning areas, students are also enrolled in physical education classes which often are held outdoors when weather permits. Students also experience teacher directed physical education

on one of our 3 playground areas. Arcado PTA hosts an annual Fun Run. This year marks our school's 17th race. The community event brings out runners of all ages. We have a 1K race for students broken down into two groups; K-2 & 3-5. After the 1K race, we have a 5K race for adults (many staff members participate) and students. Many Arcado alumni come back for this event. Ribbons are awarded to 1st, 2nd, & 3rd place in each age group. In preparation of the Fun Run, our PE teacher sponsors a Fun Run Club. The students meet one morning before school each week and prepare for the event. Our teacher teaches technique, nutrition related to the day of a race, and how to prepare your body for a race. The students at Arcado love to exercise! This year our PE teacher is also sponsoring an Open Gym morning before school (once a week). She will use this time to allow students the opportunity to have additional physical education using the equipment in the gym. Within the school we have a physical therapy/occupational therapy room. We affectionately call it the SPA. This type of room offers all students a place to de-escalate, de-sensitize, and receive sensory feedback which is proven to help students' focus and pay attention for longer periods of time.

C. Describe any other efforts to improve nutrition and fitness, highlighting innovative or unique practices and partnerships. Our school participates in the International Walk to School Day and the Georgia Walk to School Day.

Pillar 3: Effective Environmental and Sustainability Education

9: A. 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.

Arcado participates in the "Green & Healthy Schools" Program, which is a joint venture of Gwinnett County Public Schools and the nonprofit agency, Gwinnett Clean & Beautiful. The G&H Schools Program requires planning, executing, and documenting progress in seven "earth friendly" pathways: Waste Reduction & Recycling, Education and Stewardship, Water Conservation and Watershed Protection, Air Quality, Energy Conservation, Beautification and Greenspace Preservation, & Community Impact. We would like to highlight several innovative and unique practices: One of our two school counselors, Ms. Alina Ruiz, volunteers at the Confederate Hall Historical & Environmental Education Center in Stone Mountain Park and is a member of the Stone Mountain Memorial Association. Her connection with the park has provided several unique opportunities for our students and one is that Ms. Ruiz brought in the Native Georgia Reptiles and Amphibians for an in house field trip for several grade levels. Also, Ms. Ruiz implements the unique practice of holding small group sessions in the outdoor classroom and uses the environment to make connections with students' feelings and emotions. The Sierra Club, a school partner, presented our school with a Red Maple tree on Arbor Day. Green Team members were present for the planting and the ceremony.

B. Our school has an environmental or sustainability literacy requirement. Gwinnett County Public Schools, the largest school system in the state of Georgia, has a comprehensive, integrated environmental education program that extends beyond the essential Georgia Performance Standards (GPS). The GCPS AKS, Academic Knowledge and Skills, incorporate environmental education at each

grade level K-12 and is aligned to the Common Core. Environmental education is prominent in our curriculum, and the Gwinnett AKS goes beyond the standard state GPS requirements with regards to student knowledge and mastery. GCPS's rigorous academic curriculum allows for inquiry based learning and also includes the use of models, investigation, and data analysis. To help support the environmental content in grades K-5, our school employs a science specialist that provides in-depth exposure and inquiry experiences for every student in the building. This helps provide a deep STEM foundation that students can build upon in their secondary years. Additionally, our school has outdoor learning areas that bring the environment to the students in a new way.

C. Environmental and sustainability concepts are integrated throughout the curriculum. The GCPS curriculum encourages environmental literacy and critical thinking at all grade levels in all content areas. Here at Arcado we have a group of students called, "The Recycling Readers". These students visit classrooms and read books on environmental topics. They take props to demonstrate key concepts and focus on key vocabulary. After reading, the "reader" presents a trash bag to the class and promotes our goal of a litter free campus. There are many examples of STEM initiatives within our school. One was an Eagle Scout project where an outdoor amphitheater was designed and built by a former Arcado student. Second and Third grade gifted students programmed a computerized robot called "Roemer". The robot moved about within an environmental setting. The emphasis was on the students learning about angles and programming. To demonstrate a cross curricular planning on environmental issues our second grade teachers teach a unit on seed sprouting and germination. In Art the students created a plant pot out of clay that was used to plant the sprouting plant. The students gifted the plant to their mothers on Mother's Day. A culminating field trip to the Atlanta Botanical Gardens was taken. Another example of cross curricular teaching and learning was the science fifth grade unit on the identification of destructive and constructive forces on the earth surface and its human impact. The AKS was integrated into writing and technology where they created a multi-media project on GA landforms. Many of our grade level field trips are science based: Fernback Science Center, Atlanta Botanical Gardens, Vulcan Rock Quarry, Stone Mountain, Elachee Nature Center, The Atlanta Zoo, and our in house learning through UGA's 4-H program. One of the unique programs at Arcado is our nature-based counseling. One of our counselors is a former instructor at the Stone Mountain Nature Center. We believe a connection to nature fosters a connection with oneself.

D. Environmental and sustainability concepts are integrated into assessments. The more rigorous standards and quality instruction in environmental science have helped our district outperform the state and metro-Atlanta average on all state assessments for the last five years. As our 2012 assessment results indicate, GCPS students are performing above the state average in Science across all grade levels on the Georgia Criterion-Referenced Competency Tests (CRCT) and End of Course Tests (EOCTs). Since there are elements of environmental science across the curriculum, we know that they are also demonstrating mastery of the environmental science content as well.

E. Students evidence high levels of proficiency in these assessments. Historically, Arcado student performance is above the state and county average each year. In the Spring 2013, 59.7% of our 4th grade students exceeded science standards on the CRCT. In the Spring 2012, 79% of our 5th graders

exceeded standards with a mean scale score of 873.

F. Professional development in environmental and sustainability education are provided to all teachers. Professional development is ongoing at Arcado. Our teachers are a part of Professional Learning Communities (PLC) where they collaborate on teaching and learning and seek innovative ideas and practices in science. Our Green Team Leader, Dr. Kathy Dean, attends monthly staff development sessions led by Gwinnett Clean & Beautiful and their Green Healthy Schools team. Dr. Dean is also a presenter who shares “best practices” at the Green & Healthy Schools meetings for all district green teachers, as well as mentors other new Green Schools. Ms. Curtis, Kindergarten Teacher, serves on several district and community teams. She is on the GCPS Science Leadership Team, serves on the Teacher Advisory Committee at the Gwinnett Environmental and Heritage Center, was awarded the GA Tech. Grant to complete her science endorsement (3 year commitment), and teaches and mentors GCPS teachers in Science and Environmental Literacy. Both professionals’ teaching extends beyond the students and teachers at Arcado. Our school has made a commitment to STEM certification. We are in the beginning stages of the process.

10: A. For schools serving grades 9-12, provide:

A1. Percentage of last year's eligible graduates who completed the AP Environmental Science course during their high school career: N/A

A2: Percentage scoring a 3 or higher: N/A

B. How does your school use sustainability and the environment as a context for learning science, technology, engineering and mathematics thinking skills and content knowledge? The GCPS curriculum encourages environmental literacy and critical thinking at all grade levels in all content areas. Here at Arcado we have a group of students called, “The Recycling Readers”. These students visit classrooms and read books on environmental topics. They take props to demonstrate key concepts and focus on key vocabulary. After reading, the “reader” presents a trash bag to the class and promotes our goal of a litter free campus. There are many examples of STEM initiatives within our school. One was an Eagle Scout project where an outdoor amphitheater was designed and built by a former Arcado student. Second and Third grade gifted students programmed a computerized robot called “Roemer”. The robot moved about within an environmental setting. The emphasis was on the students learning about angles and programming. To demonstrate a cross curricular planning on environmental issues our second grade teachers teach a unit on seed sprouting and germination. In Art the students created a plant pot out of clay that was used to plant the sprouting plant. The students gifted the plant to their mothers on Mother’s Day. A culminating field trip to the Atlanta Botanical Gardens was taken. Another example of cross curricular teaching and learning was the science fifth grade unit on the identification of destructive and constructive forces on the earth surface and its human impact. The AKS was integrated into writing and technology where they created a multi-media project on GA landforms. Our third grade curriculum has a unit on pollution and environment which includes recycling and pollution. The teachers have integrated that learning with citizenship (Social Studies).

C. How does your school use sustainability and the environment as a context for learning green technologies and career pathways? The GCPS AKS, Academic Knowledge and Skills, incorporate environmental education at each grade level K-12 and is aligned to the Common Core. Environmental education is prominent in our curriculum, and the Gwinnett AKS goes beyond the standard state GPS requirements with regards to student knowledge and mastery. GCPS's rigorous academic curriculum allows for inquiry based learning and also includes the use of models, investigation, and data analysis. To help support the environmental content in grades K-5, our school employs a science, math & technology specialist that provides in-depth exposure and inquiry experiences for every student in the building. This helps provide a deep STEM foundation that students can build upon in their secondary years. The career pathways are embedded into the curriculum and taught via science, math, technology, art, music, health, classroom guidance, and school wide events like: Math Night, Tech Connect, & Career Day.

D. Describe students' civic/community engagement projects integrating environment and sustainability topics. Arcado participates in the "Green & Healthy Schools" Program, which is a joint venture of Gwinnett County Public Schools and the nonprofit agency, Gwinnett Clean & Beautiful. The G&H Schools Program requires planning, executing, and documenting progress in seven "earth friendly" pathways.

- #1 Waste Reduction & Recycling
- #2 Education and Stewardship
- #3 Water Conservation and Watershed Protection
- #4 Air Quality
- #5 Energy Conservation
- #6 Beautification and Greenspace Preservation
- #7 Community Impact

Arcado ES has been a G&H School since 1999 and currently holds the distinction of being a "Reaching Higher" G&H School. Participation in this program allows our faculty to collaborate and plan across the curriculum. Our Green Team Leader, Dr. Kathy Dean, also shares "best practices" at the Green & Healthy Schools meetings for all district green teachers, as well as mentors other new Green Schools.

As the end of each school year, Arcado staff and Green Team leaders document environmental goals on the G&H Schools' "Environmental Profile." We earned 144 points on this year's "Profile" and one of the top Green Schools scores among all the Green & Healthy Schools. We recently earned an award for "Sustaining Excellence in Environmental Education," after 5 consecutive years as a top performing "Reaching Higher" Green & Healthy School.

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

K- Describe the physical attributes of rocks and soils. Grade level takes a field trip to Stone Mountain Park where they learn about rock formations through hands on activities and experiences. Classes create an ecology garden in the outdoor classroom at the beginning of the school year and then on Earth Day in April they dig up the garden. The students make observations and describe the objects and

how they have decomposed or not.

1- Each year the grade level takes a field trip to the Vulcan Quarry. The general presentation includes information about Vulcan Materials Company, the use of minerals within society and particularly the role aggregates play in today's world. There is also a discussion of the mining process and how we produce aggregates.

2- Second grade teachers teach a unit on seed sprouting and germination. In Art the students created a plant pot out of clay that was used to plant the sprouting plant. The students gifted the plant to their mothers on Mother's Day. A culminating field trip to the Atlanta Botanical Gardens is taken.

3- Students investigate a variety of plant and animal keystone species and learn their critical role in maintaining the integrity of an ecosystem. Focusing on the beaver and the alligator, students discover how the wetlands are enhanced through these two keystone species by visiting the Gwinnett Environmental & Heritage Center.

4- A trip to Fernback Science Center allowed our 4th graders the opportunity explore and use multiple weather instruments.

5- Fifth graders unit learned about the identification of destructive and constructive forces on the earth surface and its human impact. The AKS was integrated into writing and technology where they created a multi-media project on GA landforms.

F. Describe how outdoor learning is used to teach an array of subjects in contexts, engage the broader community, and develop civic skills. Our students and teachers have many opportunities to engage in community engagement events. Not only do our students gain leadership skills, they also earn service learning hours. Our Green Club students participated in the following outreach events:

- Great Days of Service
- G&H School Mentoring
- Christmas Tree Recycling
- America Recycles Day

G. Describe your partnerships to help your school and other schools achieve in the 3 Pillars. Include both the scope and impact of these partnerships. Arcado participates in the "Green & Healthy Schools" Program, which is a joint venture of Gwinnett County Public Schools and the nonprofit agency, Gwinnett Clean & Beautiful.

- #1 Waste Reduction & Recycling
- #2 Education and Stewardship
- #3 Water Conservation and Watershed Protection
- #4 Air Quality
- #5 Energy Conservation
- #6 Beautification and Greenspace Preservation
- #7 Community Impact



U.S. DEPARTMENT OF EDUCATION
GreenRibbonSchools

ED-GRS (2012-2013)

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U.S. Department of Education Green Ribbon Schools 2013

For Public Schools only: Charter Title I Magnet Choice

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

Official School Name: Arcado Elementary School
(As it should appear in the official records)

School Mailing Address 5150 Arcado Road
(If address is P.O. Box, also include street address.)

Lilburn GA 30047
City State Zip

County Gwinnett County State School Code Number* _____

Telephone (770) 925-2100 Fax (770) 931-7026

Web site/URL: http://arcado.org/home/ E-mail: penny_young@gwinnett.k12.ga.us

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

Penny Palmer Young Date 2-18-2014
(Principal's Signature)

Name of Superintendent* J. Alvin Wilbanks
(Specify: Ms., Miss, Mrs., Dr., Mr., Other)

District Name* Gwinnett County Public Schools Tel. (678) 301-6000

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.

J. Alvin Wilbanks Date 2-21-14
(Superintendent's Signature)

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

ED-GRS (2012-2013)

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2) improved health and wellness; and 3) effective environmental and sustainability education.

2. The district 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 Dr. John Barge

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

John D. Barge
(Nominating Authority's Signature)

Date: February 1, 2014

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

OMB Control Number: 1860-0509
Expiration Date: February 28, 2015

Public Burden Statement

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless such collection displays a valid OMB control number. The valid OMB control number for this information collection is 1860-0509. Public reporting burden for this collection of information is estimated to average 37 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The obligation to respond to this collection is required to obtain or retain benefit P.L. 107-110, Sec. 501, Innovative Programs and Parental Choice Provisions. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the U.S. Department of Education, 400 Maryland Ave., SW, Washington, DC 20202-4536 or email ICDocketMgr@ed.gov and reference the OMB Control Number 1860-0509. Note: Please do not return the completed ED-Green Ribbon Schools application to this address.