



School Nominee Presentation Form

ELIGIBILITY CERTIFICATIONS

U.S. Department of Education Green Ribbon Schools

Public Charter Title I Magnet Private Independent Rural
Name of Principal: Mrs. Amy Bartlett

Official School Name: Sharon Elementary
Official School Name Mailing Address: 3595 Old Alabama RD, Suwanee, GA 30024

County: Forsyth State: Georgia School Code Number \*: 658-0104
Telephone: 770-888-7511 Fax: 770-888-7510
Web site/URL: www.forsyth.k12.ga.us/sharon E-mail: abartlett@forsyth.k12.ga.us

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

Signature of Principal: Amy Bartlett
(Principal's Signature)

Date: 2/14/19

Name of Superintendent: Dr. Jeff Bearden

District Name: Forsyth County

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

Signature of Superintendent: Jeff Bearden
(Superintendent's Signature)

Date: 2/14/19

Nominating Authority's Certifications

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.

Signature of Nominating Authority: Richard Wood
Date: 2/14/19
(Nominating Authority's Signature)



## 2019 Georgia Department of Education Green Ribbon Schools Application

School Contact Information

School Name: Sharon Elementary

Street Address: 3595 Old Atlanta RD

City: Suwanee State: GA Zip: 30024

Website: www.forsyth.k12.ga.us/sharon Facebook page: https://www.facebook.com/sharonelem/

Principal Name: Amy Bartlett

Principal Email Address: abartlett@forsyth.k12.ga.us Phone Number: (770)888-7511 ext. 121065

<p>Level</p> <p><input type="checkbox"/> Early Learning Center</p> <p><input checked="" type="checkbox"/> Elementary (PK - 5 or 6)</p> <p><input type="checkbox"/> K - 8</p> <p><input type="checkbox"/> Middle (6 - 8 or 9)</p> <p><input type="checkbox"/> High (9 or 10 - 12)</p>	<p>School Type</p> <p><input checked="" type="checkbox"/> Public</p> <p><input type="checkbox"/> Private/Independent</p> <p><input type="checkbox"/> Charter</p> <p><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><u>Forsyth County Schools</u></p> <p>Is your school in one of the largest 50 districts in the nation?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <hr/> <p>Total Enrolled:</p> <p style="text-align: center;"><u>948</u></p>
<p>Does your school serve 40% or more students from disadvantaged households?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>% receiving FRPL <u>3.5%</u></p> <p>% limited English proficient <u>2.5%</u></p> <p>Other measures _____</p>	<p>Graduation rate: <u>NA</u></p> <p>Attendance rate: <u>98.7%</u></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  No Program(s) and level(s) achieved: **Sharon Elementary School received Energy Star Certification in 2015.**

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

Yes



- **Keep Forsyth County Beautiful Green School, Gold Level Award, 2018**
- **Keep Forsyth County Beautiful, Coordinator of the Year, Lauren Sarnacki, 2018**
- **Safe Routes to School Georgia BRONZE-Level Partner 2017-2018**
- **Safe Routes to School Georgia GOLD --Level Partner 2018-2019**
- **Atlanta Audubon Society's Wildlife Sanctuary**
- **Certified Wildlife Habitat of the National Wildlife Federation 2015**

#### **Nutrition & Cafeteria Awards**

- **Georgia Golden Radish**
- **Shake It Up, GADOE school nutrition initiative--Gold level, 2016, 2017, 2018**
- **Georgia Grown's Feed My School for a Week winner (2012, 2013, 2014)**
- **Forsyth County Schools' Golden Plate Award--awarded to schools in recognition of exemplary school nutrition programs in the areas of fiscal responsibility, safe and sanitary practices, student participation, accuracy in record keeping and reporting, marketing, and participation in professional training opportunities.**
- **Feed My School 3-year grant – 2013-2015**
- **Leadership Academy Graduate – 2012-2013**
- **Started a NAC (Nutrition Advisory Council) Group – 2012-Present**
- **Won Local and District Recipe Contest – 2011-2014**
- **Won State Recipe Contest – 2013**
- **Awarded Cleanliness & Kitchen Safety – Feb 2014, Dec 2014**
- **Awarded Increase in Breakfast Participation 2017-2018**
- **Piloted and Won Golden Radish 2014**
- **Ga Best Practice Farm to School 2014**
- **USDA Southeast Region Best Practice Farm to School 2014**
- **Employee of the Month – Feb 2015**
- **Golden Plate Winner – 2011-2017**
- **Shake It Up Gold – 2015-2018**
- **Golden Scroll Winner Local – 2017**
- **District Golden Scroll Winner – 2018**
- **SNA Scholarship Winner- 2017**

*Summary Narrative: Sharon prides itself in reflecting on current efforts to reduce environmental impact/costs, improve student/staff health, and provide effective environmental/sustainability education. Being green is becoming a natural part of us - students, teachers, staff, and parents are taking action to be greener. We look for and try innovative practices; understanding there might just be a better way.*

*Sharon reaches out and forms partnerships that allow us to do better because it is done together: GINGKO Lawn and Landscape, The Andrews Family, John Deere Landscapes, Mountain Stone, Lafarge Aggregates, Belgard Hardscapes, Concrete Masters, Polycor, Sharon PTO, Cherokee Feed and Seed/Rucker Pet, Boy Scouts of America Troop #415 Eagle Scouts, Sheriff's/Fire Department, Drem restaurant, John Nott (Principal Energy Engineer) at Griffith Engineering, and parent volunteers..*

*Our greatest asset to the environment surrounding our school, to our health, and to providing education is our D.I.G.S. (Discover, Inspire, Grow, Succeed) outdoor classroom, habitat, and exploration-of-all-things-science area. This once barren space evolves each year as we gain knowledge of the earth, climate, and our responsibilities as citizens. Within D.I.G.S. are all things functional:*



*pergola with tables ADA compliant for wheelchairs | concrete path stamped with native Georgia animals/plants | Georgia limestone Amphitheatre for outdoor lessons | native rock garden (exhibits marble, sandstone, limestone, granite) | rain barrel | landfill exhibit butterfly garden/organic milkweed for Monarch butterflies | chicken coop with 7 hens (eggs in cafeteria, offered to staff/families) beginnings of loofah garden | three-sided barn with clad reclaimed wood | signage including QR codes for self-directed learning | tool shed | erosion/water table | compost bins | WeatherBug Station atop school | 6 simple machines*

*We have improved this outdoor area over the past year:*

*Increasing footprint of pollinator garden | Treating raised farm beds with our fresh compost | Using erosion table to teach 3rd/5th grade importance of protecting soil | Creating "landfill" student trash in May 2017 and observing changes in decomposition of materials over following year. | Equipping D.I.G.S. with mobile whiteboard to use in different locations | Installing inground sundial ellipse to teach shadows based on Earth's position in relation to sun | Constructing sensory path made of various materials for students to walk on barefoot/with shoes | Perhaps most exciting at this time are spring 2019 plans for D.I.G.S.: | water-wicking bog with sundew, Venus flytrap, and pitcher plants dinosaur/archaeological dig*

*Students in all grades look forward to lessons in D.I.G.S. and D.I.G.S. Days. Cross-curricular instruction occurs with reduce, reuse, recycle; especially, with the ability to observe the landfill exhibit over time. Cross-grade level teaching allows older students to share decomposition knowledge to younger students - arguing reasons promoting recycling.*

*Indoors, we look to our recycling ambassadors or Green Team made up of fifth graders to manage collection bins, recycling education within all classrooms, Terracycle product accumulation, and news shared out to the entire school population. The Green Team raises awareness of collection protocols, Walk-to-School days, Adopt-a-Road days, community-sponsored events like cleaning up a local river/recycling of electronics, and the new student-driven undertaking of Crayola ColorCycle.*

*A well-visited location is C.A.S.T.L.E. (Collaborative and Social Technology Learning Environment) or media center/library area. Besides being the leader of MakerSpace, our librarian tweets out new texts offered for checkout including an increase over past years of nonfiction texts covering habitats, climate change, recycling, landfills, garbage, composting, scientists, geology, Earth, and environment.*

*Our robotics team received \$4,700 grant from Forsyth County Education Foundation and will use funding to enhance robotics instruction. Last year, Sharon's team placed third in First LEGO League Robotics State Competition by removing microplastics from drinking water. This year, the team is recycling plastics using a 3-D recycler by grounding up plastic waste and turning it into 3-D filament to become a 3-D product. Students are the driving force of this initiative.*

*We received GOLD status for awards such as Keep Forsyth County Beautiful (KFCB) 2018 or Safe Routes to School Georgia GOLD Level Partner (on target for 2019). We began partnership with Georgia Commute Schools (spring 2019). We were recognized by KFCB as having Coordinator of the Year. Our music teacher received \$5,000 from Georgia Council for the Arts Vibrant Communities Grant for Fine Arts to improve lighting/sound during stage performances. Helping us get started from the very beginning was Sawnee Electric Cooperative.*

*Sharon's green mindset began as small thoughts, small committees. Teachers, parents, administrators, and local community partnered up. From student recycling ambassadors and parent science committees grew even more cognizance and awareness. An indoor Tower Garden adds salad to daily lunches. D.I.G.S. vegetables are school lunch options. Students walk to the recycling center across the street to better understand purposes of why we do what we do. Custodial staff switched to green cleaning products. Lastly, we have partnered with Georgia Commute schools to promote anti-idling.*



**Pillar I: Reduced Environmental Impact and Costs**

**Energy**

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

(X) Yes 5.7% Over (m/yy - m/yy): May/16 – Apr/18

Initial GHG emissions rate (MT eCO2/person): 1.17

Final GHG emissions rate (MT eCO2/person): 1.10

**Offsets: We will continue to evaluate this data and work towards an even greater increase in reduction when decision-making to do so is possible at the building level. How did you calculate the reduction? The total annual energy consumption from electricity and natural gas was converted into equivalent metric tons of CO2 for the years May 2016 – Apr 2017 and May 2017 – Apr 2018 using the EPA’s greenhouse gas conversion calculator. The annual totals were then compared, and a percent reduction was calculated.**

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

If yes, what is your score? 48 If score is above a 75, have you applied for and received ENERGY STAR certification? (X) Yes Year: 2015

3. Has your school reduced its total non-transportation energy use from an initial baseline? (X) Yes ( ) No

Current energy usage (kBTU/student/year): 6,013

Current energy usage (kBTU/sq. ft./year): 42.76

Percentage reduction: 11.77% over (m/yy - mm/yy): May/16 – Apr/18

How did you document this reduction? Tabulating utility consumption through Energy Star. After totaling energy consumption from historical bills, the total annual kWh and therm consumptions were converted into kBTU and added together for each year. Values of energy usage were then calculated with respect to “per student” and “per square foot” then a reduction was calculated between the years of May/16 – Apr/17 and May/17 – Apr/18.

5. In what year was your school originally constructed? 2003

What is the total building area of your school? 147,649 square feet

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?

**The county installed low-flow faucets to reduce water consumption in sinks, toilets, and urinals. Sharon Elementary has had low-flow water fixtures installed for a number of years and has not seen a significant increase or decrease in water consumption since that time.**

Average Baseline water use (gallons per occupant):



**Annual kgal consumption for May 2016 – Apr 2017: 7693, Avg monthly consumption: 641**

**Annual kgal consumption for May 2017 – Apr 2018: 7829, Avg monthly consumption: 652**

102% increase. Sharon Elementary has had low-flow water fixtures installed for a number of years and has not seen a significant increase or decrease in water consumption since that time during the school year. We don't feel that the most recent increase is caused by our student population changes (although there was a slight increase). We are actually rethinking the types of clubs and camps offered at our school during the summer. We will need to have better oversight of the water used during the summer months – especially with all outdoor activities and events. In addition, with the age of the building, we have noticed an increase in stuck faucets within student bathrooms. This is being addressed with replacement parts.

Time period measured (mm/yyyy - mm/yyyy): **May 2016 – Apr 2018**

How did you document this reduction (ie. ENERGY STAR Portfolio Manager, utility bills, school district reports)?  
**Tabulating utility consumption through Energy Star.**

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

Types of plants used and location:

**Water Runoff- retention pond, large cistern in DIGS that collects roof runoff, dry creek bed in DIGS. Slopes and hills planted with Bermuda and wild grasses. Mulch used in other areas to prevent erosion. Other areas are not mowed to allow natural habitat and growth.**

**DIGS Plantings – variety of oak species, seasonal farm vegetables, herbs, butterfly garden with native wildflowers and milkweed.**

**There are also the following:**

**Satsuki Szaleas, Annabelle Hydrangea, Camellia Japonica, Helleborus, Oakleaf Hydrangea, Abelia Rose, Creek, Butterfly Weed, Angelina Sedum, Daylilies, Emerald Green Arborvitae, Viburnum, Brown Turkey Fig, Ginko Biloba, Iris, Crocus, Tardiva Hydrangea, Fothergilla, Indian Hawthorn (dwarf), Bartlett Pear, Ruby Loropetalum, Apple tree**

9. Describe alternate water sources used for irrigation. (50 words max or whatever word max you indicate to your applicants)

**To irrigate our DIGS, we use the rainwater we collect in a 200-gallon cistern. To irrigate our upper playground, we use reclaimed rainwater.**

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

**We collect water in a 200-gallon cistern buried underneath our D.I.G.S. and is used to irrigate the crops. We also have a containment pond at the front of the school.**

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

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



**Forsyth County’s water comes from Lake Lanier and is treated by Forsyth County or City of Cumming. More than 1,300 tests are conducted annually by Environmental Protection Division (EPD) of Georgia DNR and Forsyth County to ensure safe water. Tests monitor tap water for organisms, mineral and organic substances; over 100 different contaminants including bacteria, metals, nitrates and pesticides.**

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

**Forsyth County consistently has tested lead in the annual water quality reports. Due to the low levels of lead and copper in the water, the state has reduced the frequency of testing to every three years.**

14. What percentage of the school grounds are devoted to ecologically beneficial uses? **Twenty percent (4 acres) of our school grounds (20 acres) are devoted to ecologically beneficial uses. We have our outdoor science learning center (DIGS), a containment pond, and a trail that are ecologically beneficial.**

**School grounds: 20.5 acres of school grounds. (871,200sq. ft)**

**DIGS=15,000 sq. ft. Our from school is a Certified Wildlife Habitat through the National Wildlife Federation and an Atlanta Audubon Society Wildlife Sanctuary.**

**Waste**

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): **12yds x 20 x 50% = 120 cubic yards/month**

B - Monthly recycling volume in cubic yards (recycling dumpster sizes(s) x number of collections per month x percentage full when emptied or collected): **8 yds x 8 x 90% = 57.6 cubic yards**

Recycling Rate = ((B + C) ÷ (A + B + C) x 100): **57.6/(177.6) x 100 = 32%**

Monthly waste generated per person = (A/number of students and staff): **120/1,057 = 0.11 cubic yd per month**

16. What percentage of your school's total office/classroom paper content is post-consumer material, fiber from forests certified as responsibly managed and/or chlorine-free? **One hundred percent of our school’s total office/classroom paper is fiber from forests certified as responsibly managed as the packages of both multi-purpose paper and construction paper are labeled Sustainable Forestry Initiative: Certified Sourcing.**

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

Flammable liquids <b>NONE</b>	Corrosive liquids <b>NONE</b>	Toxics <b>Floor Stripper</b>	Mercury <b>NONE</b>	Other: <b>NONE</b>
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How is this measured? **Schedule is created to strip certain floor areas each year during the summer months when school is not in session. Students are not in session during this time who could have adverse reactions to this product. A 5-gallon box will**



do two classrooms. Stripper is mixed in 25 gallons of water (small 30-gallon trash can). Average of 10 rooms per summer would mean 125 gallons of water used to strip areas.

How is hazardous waste disposal tracked? Diluted stripper is disposed in custodial closet basins.

Describe other measures taken to reduce solid waste and eliminate hazardous waste. At this time, we are limited to the constraints of our current floor stripper product. It does contain toxins. We currently use: 509 Freedom Floor Stripper. In the future, we will obtain a non-toxic product. We adhere to no-dumping of floor-stripping used water outside in water runoff drains. We only order the EXACT amount that is needed and have no extra product stored in the school. We are making efforts to eliminate the floor stripper all together. This should be possible for next school year. Our principal has committed to stopping the use of the floor stripper. There are also plans to remove old tile in all the hallways that needs to be stripped every 5 years or so and to replace with porcelain tile that will NOT need stripper. Tile replacement will take place over the next 2 summers.

18. Which green cleaning custodial standard is used? Our custodians use the following green cleaning products: Glance NA Glass & Multi-Purpose Clear Non-Ammoniated and Prominence Heavy Duty Floor Cleaner

What percentage of all products is certified? 66% of all products are certified green.

What specific third party certified green cleaning product standard does your school use? The green cleaning products we use 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? (Note if your school does not use school buses) WALK: On a typical school day, there are no walkers. At this time, we are located on a 4-lane highway, without access to a crossing guard. Therefore, no students can walk safely to school unless it's a designated Walk-to-School Day. WALK-TO-SCHOOL DAYS: We typically average 250+ walkers. BUS: 560 Bus Riders in AM (59%) BIKE: 0% (same reason as for no walkers on a typical school day) CARPOOL: 260 automobiles (405 car riders) (41%) For afternoon carpool pick-up, we plan to promote and campaign for an idle-free school or even anti-idling time periods. Promotion through demonstrations, education, and signs will support this endeavor.

How is this data calculated? To calculate, we rely on the school data clerk, school district transportation reports, physical body counts, and using a clipboard/tally system. We actually count cars on regular days, create and average and compare to designated walk-to-school days.

20. Has your school implemented?

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

This will begin in 2019 through our partnership with Georgia Commute Schools. We will be moving forward with the help of Nicole Hollis to encourage parent drivers to turn off their engines while waiting for students. Incentives will be given, and the hope is to have the local high school students work alongside our elementary school in this initiative called Breathe: Be IDLE-FREE Campaign.

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

From the front door, there is 27 feet. It is 37 feet from the air intake vent located on the front of the building.

Safe Pedestrian Routes to school or Safe Routes to School



**We partner with Safe Routes to School Georgia for each of our Walk-to-School Days: September 13, 2018, October 10, 2018, November 14, 2018, February 13, 2018, March 6, 2019 April 10, 2019**

Describe activities in your safe routes program **Speed limits are reduced from 45 mph to 35 mph during school arrival and dismissal times. We partner with Safe Routes to School, GA on 6 designated Walk-to-School Days. School resource officers, local sheriffs, school staff, and/or the fire department direct traffic at the school's entrance EVERY day.**

21. Describe how your school transportation use is efficient and has reduced its environmental impact **Buses turn-off engines while waiting for students to load/unload. Walk-to-School Days increased from 2 days to 6. Students walking to school increased from 500 students (2018), to a projected 1500 students (2019): three times the number of walkers than previous years and 1,560 less cars creating emissions.**

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. **Walk-to-School Days (WTSD)**

- **Learn benefits of walking versus driving on health/environment**
- **SRTS Coordinator works with SRTS-GA: *walkbiketoschool.org***
- **WTSD Committee works student news crew to promote WTSD to student body/staff**
- **Electronic notifications to families**
- **Recycling Ambassadors/Green Team (students) create flyers/posters and raise awareness of WTSD**
- **Strong partnerships: SROs, local sheriffs, fire department**
- **Local coffee shop, Drem, partners offering hot chocolate to walkers**

#### **Adopt-a-Road Cleanups**

- **Increase environmental awareness as earth-friendly citizens**
- **James Burgess Road - Old Atlanta Road**
- **5th graders/teachers/administrators/parents after school 1.5 hours**
- **SRO, Officer Lin, directed traffic/roadside safety**

#### **Recycling Ambassadors/"Green Team"**

- **5th-grade club (school hours)**
- **Collect recycling bins (all rooms)**
- **Gather/Ship *Terracycle* products (Capri Sun, Go-Go Squeeze, Little Bites)**
- **Deliver recycling/environment lessons for K-3**
- **Create recycling/environment videos for morning news**
- **Upcycle art (lids)**
- **Commitment: reducing, reusing, and recycling as a way of life**

#### **D.I.G.S. Composting**

- **Two bins: vegetable waste**
- **Other: student homes**
- **Indoor Garden Towers**

**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.:

**Our school has a process for achieving long-term, environmentally friendly sound, pest suppression through the use of a variety of technological and management practices. Pesticides are applied to include structural and procedural modification that reduce the food, water, harborage, and access used by pests. Our custodians are trained on preventative measures to eliminate pests through cleaning procedures.**

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

**This data reflects the amount of pesticide usage at Sharon Elementary School, located at 3595 Old Atlanta Rd, Suwanee, GA 30024, for the 2017 calendar year. Usage is broken down by liquid pesticide, baiting pesticide, and non-pesticide products. The areas of use could include interior and exterior.**

**We could reduce these numbers indoors by educating the students even more about leaving food in areas that could attract bugs/insects. This includes within desks, cubbies, throughout halls, and even cleaning out backpacks from home. Our overall goal is to lessen the amount or even eliminate the use of pesticides in and around our school and to not have any negative effects on student or staff health. We know one way to do just that is to make deliberate choices to keep indoor spaces clean, dry, and well ventilated to avoid pest problems from the start. In the future, we can be more proactive to make sure there is always postings and notifications of pesticide applications. We can make sure that protocols are set up to do the following when possible: dilute pesticides, make sure ventilation is provided in the area being treated, specify re-entry periods before staff and students may re-enter, and be aware of the product ingredients being used.**

Sharon Elementary School Pesticide Usage for the 2017 Calendar Year.			
2017			
Month	Pesticide Liquid/Aerosol/Granular/Dust	Pesticide Baits	Non-Pesticide (Traps)
	Per Ounce	Per Ounce	Per Trap
January	20	20	12
February	256	12.42	12
March	596	12.42	12
April	465.66	12.32	12
May	47.8	16	16
June	1158.21	0.18	12
July	112	0	8
August	482.91	76.81	24
September	278.07	42.32	13
October	211.14	48.18	14
November	1118.46	72.39	23
December	256	32.35	12
Total ozs.	5002.25	345.39	170
Total gallons	39.08007813		
Total student	948		
Ratio:	0.041223711		

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

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

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



[X] Our school uses fuel burning appliances and has taken steps to protect occupants from carbon monoxide (CO) **We have an electric kiln with proper ventilation to support both indoor and outdoor air quality. Our cafeteria uses electric and natural gas. We have regular maintenance of appliances in order to protect occupants from carbon monoxide.**

[X] Our school does not have any fuel burning combustion appliances

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

**Our school does not have radon testing performed because we do not have a basement.**

4. Describe how your school controls and manages chemicals routinely used in the school to minimize student and staff exposure. **6 Custodial Workers received Green Cleaning Product training: replacement chemicals, methods and practices to use the materials**

- Custodial workers were also assessed on their knowledge of the new procedures and chemicals
- Sprays are discouraged unless sprayed directly on cloth
- No known carcinogenic effects are found in either Glance NA Glass & Multi-Purpose Cleaner Non Ammoniated or Prominence Heavy Duty Floor Cleaner.

5. Describe actions your school takes to prevent exposure to asthma triggers in and around the school. **The custodial team has been trained not to use aerosol sprays. Any spraying must be done directly on a cloth before it is applied to a surface.**

- Classroom door knobs, light switches, tables/desks, and floors are cleaned on a daily basis.
- Custodians attend to any leaks or plumbing issues in a timely manner.
- School's Science Lab does not have any animals with fur to limit pet allergy exposure.
- Teachers educate, monitor and warn of potential food-allergy triggers.
- Each classroom's doorway is docked with a hand-sanitizer dispenser to prevent spread of germs.
- Outdoor exposure is limited on poor air quality days

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. **Sharon Elementary HVAC systems are tied into a central building automation system that records temperature and humidity throughout the building and is monitored by facilities staff. Air Handler leaving air temperatures keep appropriately low in order to maximize dehumidification of the air circulated in the building. The school has not recently experienced any mold issues so there have not been needs to institute remediation procedures. To further improve conditions, the school board approved funding for the design of new dedicated energy recovery ventilation units to provide extra dehumidification and efficient management of outside air.**

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

**The school HVAC system currently has central exhaust systems that pull air out of all janitor's closets and bathrooms. To further improve conditions, the school board approved funding for the design of new dedicated energy recovery ventilation/exhaust system to provide extra assurances and efficient management of these airstreams.**

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. **This is a continual service provided by the school system's facilities group. They come on**



site to inspect the filters and coils for air handling systems on a monthly basis. Coils or filters that exceed a pressure drop threshold will be replaced/cleaned as required. Staff also check for growths on units, but the school has not had any issues with that recently.

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 **Operations staff run air handling units with the design level code ventilation required and operate system ventilation fans constantly during occupied hours via the central control system. Additionally, new dedicated ventilation systems are in design for the school that will increase ventilation rates and provide assurance of proper operation.**

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. **Sharon Elementary has begun implementation of an IAQ Management Plan to ensure the health and comfort of all students and staff. In following the guidelines set out by the EPA IAQ Tools for Schools, Sharon Elementary has appointed an IAQ Coordinator to manage and coordinate all necessary IAQ related communications and tasks, along with a team of representatives from the different staff groups to help promote the program. The Coordinator has developed a plan for completing the required surveys of potential issues that will be taken from teachers, administrative officials, and health officers/school nurses to document potential risks. These surveys will be followed up by a walkthrough of the facilities, to inspect the grounds and ventilation equipment for any additional potential risks. These surveys and walkthroughs will be done according to the recommended EPA checklists and conducted annually at a minimum. Any identified issues will be evaluated, prioritized, and dealt with in house if possible. Consultants and professionals will be contacted for any corrective action requiring specialized expertise.**

#### **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.

[X] Our school participates in a Farm to School program to use local, fresh food. **Our school has been awarded the Golden Radish Award for extraordinary work in farm to school. Additionally, we have received Best Practice Awards from the Georgia Department of Education for the Southeast region for our farm to school participation. Our school won a state recipe contest using ingredients from our school garden.**

[X] Our school has an on-site food garden. **Our outdoor science education center, the D.I.G.S., has an on-site garden. Additionally, we have two Tower Gardens inside our school.**

[X] Our school garden supplies food for our students in the cafeteria, a cooking or garden class or to the community. **Our school garden & Tower Gardens supply food for our students in the cafeteria.**

- Tower gardens
  - Types of lettuce change seasonally (red leaf, green leaf, collards, swiss chard, kale, arugula, buttercup, buttercrunch, frisee, and spring mix).
- School Garden (D.I.G.S. - Discover Inspire Grow Succeed)
  - tomatoes, squash, zucchini, brussel sprouts, sweet potatoes, a variety of peppers, cucumbers, pumpkins, watermelon, loofah, carrots, radishes, strawberries, blueberries, apples, pears, and turnips.



- Eggs from chickens in the D.I.G.S.
  - Our chickens produce 5-7 eggs a day. Our cafeteria staff uses these eggs in their Cobb salads. Surplus eggs are given to teachers to take home.

[X] Our students spent at least 120 minutes per week over the past year in school supervised physical education. Our students participate in physical education for at least 20 minutes of recess daily for a total of 100 minutes per week. Our students participate in physical education as a part of their specials rotations for 45 minutes, 2 times a week for a total of 90 minutes per week.

[X] At least 50% of our students' annual physical education takes place outdoors. Students have many locations for their outdoor physical education including soccer fields, basketball courts, and multiple playgrounds.

[X] Health measures are integrated into assessments. Our students are assessed using the FitnessGram test. This test measures aerobic capacity, body composition, muscular strength, endurance, and flexibility.

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

- Students (PK-5) have free play/recess: soccer fields, basketball courts, and three-different playgrounds including slides, swings, mulched space, shade space, open-green space, and climbing areas/bars.
- P.E. classes utilize various parts of campus depending on standards (i.e. mile run, basketball courts, open field, etc.)
- Outdoor nature trail runs along creek to teach habitat, food chain, and decomposers. Students learn from the bat house found at the trailhead.
- Students are provided instruction outside in the DIGS. Lessons prepared by Science Lab teachers are available for classroom teachers (ie. Erosion table). Teachers create own lessons and deliver in the DIGS.

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

- Jump Rope for Heart
- Cafeteria provides nutrition education through "Harvest of the Month" - locally-grown, seasonal fruit/vegetable featured/served
- Weight Watchers initiatives, after-school yoga, weight-loss competitions (staff)
- Dance-a-Thon (PTO)
- Students donate for Blessings in a Backpack
- No Homework Wednesdays: coordinating with middle school to decrease stress/anxiety
- Fun/BYOT Run (county)
- Ticket incentives for earning treasure out of P.E. box
- Physical activity calendars for home/family
- "Active Knights Wall": students' participation in physical activity outside school photos/pictures
- Resources/apps students access to be active
- DoJo Partnerships: run DOJO station at Field Day, come as special guest during class
- Lil' Vibe sessions (2nd Grade)
- We only bake or steam foods. We no longer fry foods.

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:

Sharon Elementary uses a coordinated school health approach. As a team, the nutrition services and registered nurse work together to provide healthy, allergy-safe, gluten-free meals for those children needing special diets and to ensure the most nutritious options possible. Diabetic care is also coordinated with nutrition services.

The Physical Education department collaborates with the registered nurse regarding students with special needs, orthopedic issues, and students with asthma, so that they may benefit from exercise to the highest level possible.

The registered nurse works with the entire school staff in ensuring that they are aware of all students' medical needs and are taught extensively in first-aid procedures. The nurse provides classroom education regarding nutrition, hygiene, puberty, safety, oral health, and the importance of physical activity and the dangers of obesity. The RN also coordinates vision and hearing screenings, and ensures immunizations are up to date on all students. The bus drivers are also educated on life saving first-aid and emergency medications to ensure the safety of the students while traveling to and from school.

The registered nurse also works with the administration in providing health-promoting options for the staff, such as, Weight Watchers, and discounted gym memberships.

Community and family involvement is also key to providing coordinated school health. The registered nurse works with families regarding their children's medical and emotional needs at school, provides referrals, and consults with the entire school team when issues arise. The nurse assists families in coordinating the specialized medical needs of their child, such as diabetes care, catheterizations, and emergency medications, while at school. The RN also educates the parents regarding important medical issues/psychological issues that relate to their child, such as providing further education regarding their food allergies, anxiety, and lice. The families in our school are offered a free flu clinic in our county.

The RN also has a direct relationship with the school counselor and social worker. Needs of students and families are identified and shared help/aid is provided in the best way possible. We hold a Share Team meeting once a month to discuss identified students. Mental Health issues that are seen by the RN in students and/or medical complaints are also shared. Blessing in a Backpack is another way that these identified students are assisted. Assistance to identified students are also provided through programs such as Gift of Sight Day and Give a Kid a Smile Day which is coordinated by the social worker, counselor and RN.

A healthy school environment is ensured by all staff in this school to ensure the most optimal learning environment possible. The school is free of health and safety hazards. Good air quality and comfortable temperatures are maintained. The custodial staff provides a clean and sanitary school. Health clinic is available to all students and staff during school hours.

The RN also provides:

- a Monthly Health Awareness Board: The topic changes monthly to focus awareness on issues such as cold/flu, lice, sugar intake, spreading germs, rest, emotional well-being, etc.
- a staff Flu Shot Clinic each year
- staff training in first aid, Stop the Bleeding, CPR and AED

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:



- Nursing students are assigned each year from Mercer University and Lanier Technical College which work closely with the registered nurse to provide care and education to the students.
- Northside Hospital Foundation provided a grant to the registered nurse through their partners in education program. The registered nurse was able to purchase needed items for the clinic with this grant.
- Our Parent Teacher Organization (PTO) supports the health and safety of our school. They purchased an AED for our playground and support the nurse in providing volunteers to assist with health screenings.

16. Does your school have a school nurse and/or a school-based health center? (X) **The school clinic is open from 7:00am-3:00pm each school day and is staffed by a registered nurse.**

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

- **Our school provides mentors from our local high school for identified elementary students who could benefit from the mentor relationship.**
- **The RN identifies students who are struggling with mental health issues, such as, anxiety, depression, domestic/family issues and refers them to our school counselor.**
- **Our school has a no bullying policy.**

**School Health Services includes preventive services, education, emergency care, referral, and management of acute and chronic health conditions. Services are designed to promote the health of students, identify and prevent health problems and injuries, and ensure care for students by having all of the following in place:**

- **7 Mindsets Curriculum: relationship-based teaching and social-emotional learning**
- **Mindsets in Motion: Community service projects to engage students in application of 7 Mindsets (Pencils to Peru, purchased goats for families in Africa, served breakfast to local fire department, Christmas donations to local charities, etc.)**
- **School Counselor: Provides both scripted lessons/curriculum to PK-5 and counsels students on an individual basis.**
- **Counseling Small Groups: Our school counselor meets with various groups of students based on individual need- i.e. divorce, self-esteem, bullying, etc.**
- **School-wide promotion of World Kindness Day on November 13, 2018 with classroom read-aloud, activities, videos, and activities.**
- **Relay for Life: The mission of the Relay for Life Team is to raise money and awareness for those affected by cancer.**

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. **Received a 4 on the "School Climate Star Rating" from the Georgia DOE in 2016-2017.**

**Received a 5 on the "School Climate Star Rating" from the Georgia DOE in 2017-2018.**

**The School Climate Star Rating is calculated using data from the Georgia Student Health Survey 2.0, Georgia School Personnel Survey, Georgia Parent Survey, student discipline data and attendance records for students, teachers, staff and administrators.**



With the endeavors our school takes on, including Mindsets in Motion and Relay for Life, our PTO is our largest support of providing unique opportunities that both stay within Sharon Elementary and extend beyond into our local community and even the world.

### **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.

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

- Sharon established D.I.G.S., an outdoor science education center with an active farm garden containing 10 raised beds and two 20x20 planting areas, 7 hens producing eggs daily, a 200-gallon cistern collecting rainwater for sprinkler in garden, 1 rain barrel, 2 composting bins, a 7-foot erosion/water table, a pollinator garden, ADA accessible path, and picnic tables with one ADA accessible for wheelchairs.
- Annual DIGS Days - Annual days aimed at educating all students K-5 on best environmental practices with specific learning stations teaching the steps students can take to help these global initiatives:
  - Protecting Clean Water | Soil Health | Eating Locally Grown Produce, Meats and Milks
  - Limiting Pesticides | Reduce Reuse Recycle | Eliminating Plastics Bags | Erosion Mitigation
  - Composting | Pollinator Protection | “Planted” Landfill (daily trash/observed changes over year)
- Students plant/help harvest gardens and two aeroponics towers for cafeteria.
- Science Lab utilizes outdoor nature walking trail along creek to teach habitats, food chains, food webs, and benefits of decomposers.
- K-5 Education

Erosion | Soil Pollution | Decomposers | Composting | Clean Water and Water Collection  
Beneficial Insects | Crops and Cross Curriculum with S.S. (3 Sisters (corn/beans/squash), plant/animal life cycles  
Living and Nonliving | Types of Soil and Proper Drainage | Weather and Weatherbug Station

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**[YES] Environmental and sustainability concepts are integrated into assessments.**

**K** - a holistic study of Earth and its inhabitants, habitats and food chains. Students are observed during hands-on sessions for understanding and application of knowledge.

**1st grade** - compare and contrast basic needs of plants/animals. Design a solution to ensure that a plant or animal has all of its basic needs met.

**2nd grade** - plan and carryout investigation of plant/animal life cycles, recording changes over time, and resources necessary for a healthy habitat.

**3rd grade** - explore, research, and communicate solutions, such as conservation of resources and recycling of materials, to protect plants/animals.

**4th grade** - develop simple models to demonstrate flow of energy through food web/food chain. Demonstrate the effect of a change on an ecosystem and the flow of energy in an ecosystem when plants or animals become scarce, extinct or overabundant.

**5th grade** - construct an argument supported by scientific evidence to identify surface features caused by erosion and impact on organisms.

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



We are proud of the work done by our students. Rubrics and checklists lead our individual accountability. Daily Tweets share pics of the good work done by our scientists and learners. Regarding official data: from 2015-2018, our state assessments, the Georgia Milestones, saw measurable growth. Our Distinguished Learners rose from 23% to 53% and our students who Do Not Meet Expectations dropped from 8% to 2%. We know we are doing the right work.

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

We plan to do more.

This is an area of growth, but small steps have already started:

- We created a non-negotiable in our school. For example, we ALL recycle - whether or not it is a common practice in our home life - it is an expectation here at school.
- Teachers take pictures/tweet about recycling, promoting Walk-to-School Days, and other earth-friendly or green activities/events from their grade levels and classrooms.
- We've shared/shown what can and cannot be recycled.
- We've shared/shown pics of what can go to the composting bin.
- We've encouraged staff members to take and enjoy produce and eggs from D.I.G.S.
- Cafeteria staff recycle whenever possible, modeling what can and cannot be recycled due to food rules.
- We've increased the number of recycle bins throughout the school to be in EACH room.
- Our garden towers are in a location where teachers walk by each day, and then enjoy the produce in daily lunches.

In Spring 2019, or sooner:

- Google Slides projected showing what CAN be recycled from school lunch. We will start small with items that clearly have a symbol and do not need to be rinsed (plastic squares holding fresh carrots).

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

Sharon offers Science Lab as a special rotation to students with weekly hands-on investigations following pacing/state standards for each grade through an environmental and sustainability lens. We ask: How can we use our indoor/outdoor school environment to teach this concept (D.I.G.S.)? How can we show the relationship between standard/concept and our lives and our environment?

All students participate in D.I.G.S. Days emphasizing reducing carbon footprints, the health of water and soil, the health and well-being of pollinators, seed-dispersing animals, and growing/maintaining food sources.

Science Lab hatches a new bird species each spring. We have hatched Indian Runner ducks, Ayam Cemani and Top Hat chickens, quai, and emu. We hatch and raise a variety of praying mantis, butterflies, moths, worms, and Madagascar hissing cockroaches. Second grade hatches chickens annually. Primary hatch a variety of insects.

Students provide daily care for a bearded dragon, two eyelash-crested geckos, and two White's Dumpy tree frogs.

In-house field trips occur. Georgia Big Canyon Balloon Program came to teach about erosion and the effects on our environment and lives. Lunch and learn presentations like from *Keep Forsyth County Beautiful* on "Recycling and the Environment" conjure up powerful discussions.



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

- **The mere exposure to the science standards through a weekly science lab environment triggers investigation and questioning how things work by all our students.**
- **Students in grades 1-4 are introduced to the benefits and uses of solar energy with hands-on activities both indoors and outdoors.**
- **Third grade plans and develops working solar water heaters.**
- **Robotics Team focuses on ways to improve human effects on the environment - specifically targeting ways to reduce and reuse plastics and filament, as well as, how-to eliminate plastics from our water supplies.**
- **Visits to the county recycling center across from school spreads the message that recycling should be seen as a business and can be a positive impact on jobs in the future.**

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

- **5th-graders participated in G.O.A.T. (Greatest of All Time) project. 200+ students raised money by working at home to purchase goats/livestock for African families. For every dollar students raised, incentive tickets could be "purchased" to pie-in-the-face chosen teachers. This initiative promoted global awareness for our students, teachers, and their families while learning how farming/livestock changes lives in communities. We raised over \$2,500.**
- **Adopt-a-Road Days: Students/families/staff spend 1.5 hours after school cleaning the road adjacent to school.**
- **School science fair encourages innovative topics related to the environment and carbon foot printing.**
- **Blankets hand-tied, given to local charities as care packages - for some, a way to reuse items from home.**
- **Awareness of our human effect occurs most notably on School Cleaning Days. Students volunteer to clean classrooms, pick up litter outside, and notice all that accumulates in the halls. Decisions are made to reuse/recycle/trash items.**
- **MakerSpace is a weekly opportunity for all Sharon students to fulfill their creativity and innovative ways. Students plan, design and upcycle household instead of immediately choosing the landfill.**
- **Students promoted change in recycling process from using plastic bags to rolling cans that could be dumped with less use of plastic/plastic bags.**

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

Every grade plants/harvest garden vegetables and herbs in the D.I.G.S. outdoor science and learning center. In addition, the following learning occurs:

**K** - Explores living/nonliving, insect/animal life cycles, soil types, rocks/minerals.

**1st** - Utilizes weather instruments, investigates sound/light.

**2nd** - Investigates shadows based on the sun's position in relation to the earth, life cycles of trees/plants/insects/chickens.

**3rd** - Investigates erosion at the erosion/water table, rocks of Georgia, soil/water health, habitats, and life cycles.

**4th** - Explores and understands the benefits of food chains, food webs, habitats and decomposers. Students explore and utilize the six simple machines.

**5th** - Examines plant classifications, investigates erosion and land constructive/destructive forces. Explodes watermelons for scientific-method review.

**All** - Students can self-direct (even outside of school hours with family members) through QR codes within D.I.G.S. Students and teachers use the outdoor space on a daily basis to explore, track changes, journal, and just be. One basic example - preschool is studying farm - walk and visit the chickens and barn in the outdoor area to reinforce the knowledge and have a deeper understanding. We look to provide a real experience.



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

**The outdoor learning area was purposefully designed in order to support the following:**

- **Book buddies/Partner Reading (sitting rocks, unique hidden spaces to sit)**
- **Interactive read-aloud (sitting rocks form mini-amphitheater)**
- **Hands-on science lessons by classroom teachers (any are possible and relevant)**
- **ELA writing, poetry, journaling (students can use nature in their writing/thoughts)**
- **Outdoor classroom use (fresh air and ample space to work)**
- **Egg math and hunt (amazing hiding spaces)**
- **QR codes for self-directed learning (infusing technology into our learning)**
- **Sensory path and water wall painting (meets kinesthetic needs)**
- **Sundial Ellipse for tracking**
- **Pollinator Gardens for observation and growth**
- **General gatherings such as class lunches, celebrations**
- **Displays of upcycled art**
- **Volunteers that enjoy the work/maintenance of the area (Saturday take-care days)**

**Future plans include:**

- **Outdoor Family Movie Night**
- **Earth Day Picnic Celebration**

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.

**Sharon has opened their doors to visitors from throughout Georgia and other Georgia schools to introduce them to the D.I.G.S., Science Lab, CASTLE, to outline the process to fund, build and maintain similar initiatives in their own facilities.**

**We have had both public and private schools visit, and the goal has been to provide support and ideas to lead similar initiatives in their buildings.**

**The following have visited and sought mentoring and support:**

- **North Forsyth Middle School**
- **McAllister Elementary**
- **Cherokee County Schools - district office**
- **Blue Ridge Elementary**
- **Shakerag Elementary**
- **Shiloh Point Elementary**
- **Silver City Elementary**
- **Wesleyan**

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

**Students are leaders within our green movement. Students reflected on, researched, then answered the following questions to be on Sharon's robotics team:**

- **If you were going to research how humans travel/live in space, what would you do?**
- **How do we find/filter/store/transport water in space using robotics?**



- How do we make fair water rights?

Community experts were critical to work done by students once they formalized focus on removing microplastics from drinking water. Students met John Marshall at Forsyth County's drinking water plant, Susan B. Wilde from Warnell School of Forestry and Natural Resources at UGA, Deborah Vacs Renwick from EPA, as well as Jamie Buchanan-Dunlop and Nick Scott from Artic Live 2018. Without collaboration with field and community experts, the project could not have come to fruition.

Students immersed in their work are now seen as community experts highly connected to this real-world problem. They provide inspiration to our school, county, and state as youth that could lead careers in environment pathways and/or exhibit environmental stewardship.

Students applied for roles of team captains, research director, communication director, core-values director, and robot-design director. All participated in building missions, helping design robot EVA, researching different problems in living/traveling space, and writing presentation outlines. After identifying the problem/solution, students met each morning, after school, and even weekends to complete project; shared at Sharon's Science Night.

*Student Work EXAMPLE from current year in Robotics: There are many problems that astronauts will face on long-term space voyages including trash disposal, weight for liftoff, and limited space. On a typical trip to Mars, a round trip would take about 600 days or 1 ¾ years. Over this period of time, astronauts would produce 1118 lb. amount of trash just from their pre-packaged food. This food also costs a lot of money to be able to leave Earth's atmosphere because of its weight. Because every pound of weight cost \$10,000 to get into space, we have to be effective and efficient with everything we put on the spaceship including our trash. Everything we put on the spacecraft has to have multiple uses.*

*Our solution is the 3D Recycler which has two components: the protocycler and 3D printer. The first component in the 3D Recycler is the protocycler which converts plastic trash into filaments for a 3D printer. A protocycler first grinds the plastic trash and then melts and molds it into a plastic block which is then cut into pieces of 3D printer filament and is then wrapped around a spool for efficient storage. Then the spool is directly dispensed into a 3D printer which is the next component of our solution. Then, the final product will be dispensed out to the side of the machine. The 3D recycler works like a regular 3D printer. Each day after the astronauts have eaten their meals, they will put the trash into the 3D recycler which will then be converted into filament.*

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.

Sharon was chosen as 1 of 3 schools for Forsyth County Schools Innovation Tour. At Sharon, we recognize contemporary learning environments strive to create dramatically different educational experiences from in the past. All students are immersed in dynamic learning, focused on exploration in authentic, real-world topics and problem solvers in the context in which they occur. Through adopting a growth mindset, we have worked collectively with stakeholders, our families and the local community, to provide opportunities for innovative ideas, new instructional practices, and increased collaboration and creativity. We have transformed our school, but we have also brought in change agents from outside our school.

Sharon prides itself on innovation and offer students challenging learning experiences which incorporate latest trends in educational technology and instructional methodologies. Students are active learners and are immersed in meaningful, experiential learning. The creation of a Science Lab and outdoor classroom (D.I.G.S.), along with a media center renovation (CASTLE) and emphasis on technology integration has fostered meaningful and authentic application of blended and personalized learning.