Learn from the Leaders

June 14, 2016 1-2 p.m. Central

Be a part of the conversation!

Follow @healthyschools for the latest on our schools, environment, and education.

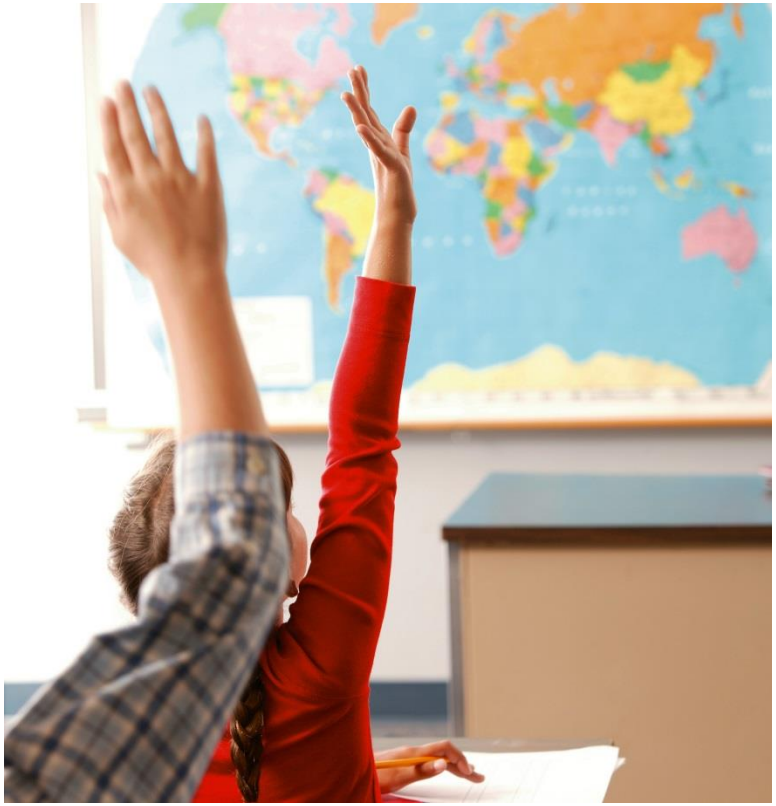
Tweet #greenclean to share your thoughts and interesting learnings from today's webinar.

We will be posting today's webinar and presentation as well as other resources!

Logistics

- Webinar will run approx. 1 hour
- A recording of the webinar will be available online
- Please take 1 minute to complete the survey at the end

Q & A Session



- Q&A will be held during the final 15 minutes
- Ask questions through “question box”

Today's Speakers

- **Tommy Little,** Associate Director of Building Services, Georgia Institute of Technology in Atlanta, GA

- **Kimberly Thomas,** Executive Director – Plant Services & Custodial Operations, Clarke County School District in Athens, GA

Healthy Schools Campaign

Five Steps to Green Cleaning in Schools

- **Step 1: Prepare Your School**
- **Step 2: Identify Green Cleaning Products**
- **Step 3: Introduce Green Equipment**
- **Step 4: Adopt Green Procedures**
- **Step 5: Share the Responsibility**

greencleanschools.org/resources/steps/

The Green Cleaning Award

- Recognizes outstanding green cleaning programs
- For K-12 and universities
- Awards programs for innovation and galvanizing schools and communities around green cleaning
- Sign up for news on next year's award here: greencleanschools.org/sign-up-for-green-cleaning-updates/

GREEN CLEANING AWARD
for Schools & Universities

2015 Green Cleaning Award Winners

K-12 Winners:

Grand Award:
Clarke County School District, Athens, GA

Honorable Mention:
Blount County Schools, Maryville, TN

College/University Winners:

Grand Award:
Georgia Institute of Technology, Atlanta, GA

Silver Awards:
North Carolina State University, Raleigh, NC

Honorable Mention:
Montgomery College, Tacoma Park, MD

Northwestern University, Evanston, IL

Honorable Mention (Recycling):
Texas Tech University, Lubbock, TX
University of California, Irvine

Honorable Mention (Chemical Reduction):
University of Tennessee, Knoxville, TN

Upcoming 2016 Events

July 28-29	Green Clean Schools Leadership Institute in Ellicott City, MD
October 25-28	Green Clean Schools Forum at ISSA/INTERCLEAN in Chicago

Learn more at greencleanschools.org/events

Green Clean Schools Leadership Institute

- **When: July 28 -29, 2016**
- **Where: Turf Valley Resort in Ellicott City, MD**
- **Who: Visionary facility managers who want to grow the green cleaning movement**
- **What: Two-day event designed to cultivate leadership skills**
- **Why: Because the green cleaning movement needs leaders like you!**

Register for the Institute

Go to:

greencleanschools.org/events/institute

Receive 25% off your registration fee until June 24!

Tommy Little

Associate Director of Building Services,
Georgia Institute of Technology

Georgia Tech's Award-Winning Renewable Cleaning Program

Tommy Little
Associate Director, Building Services

2016

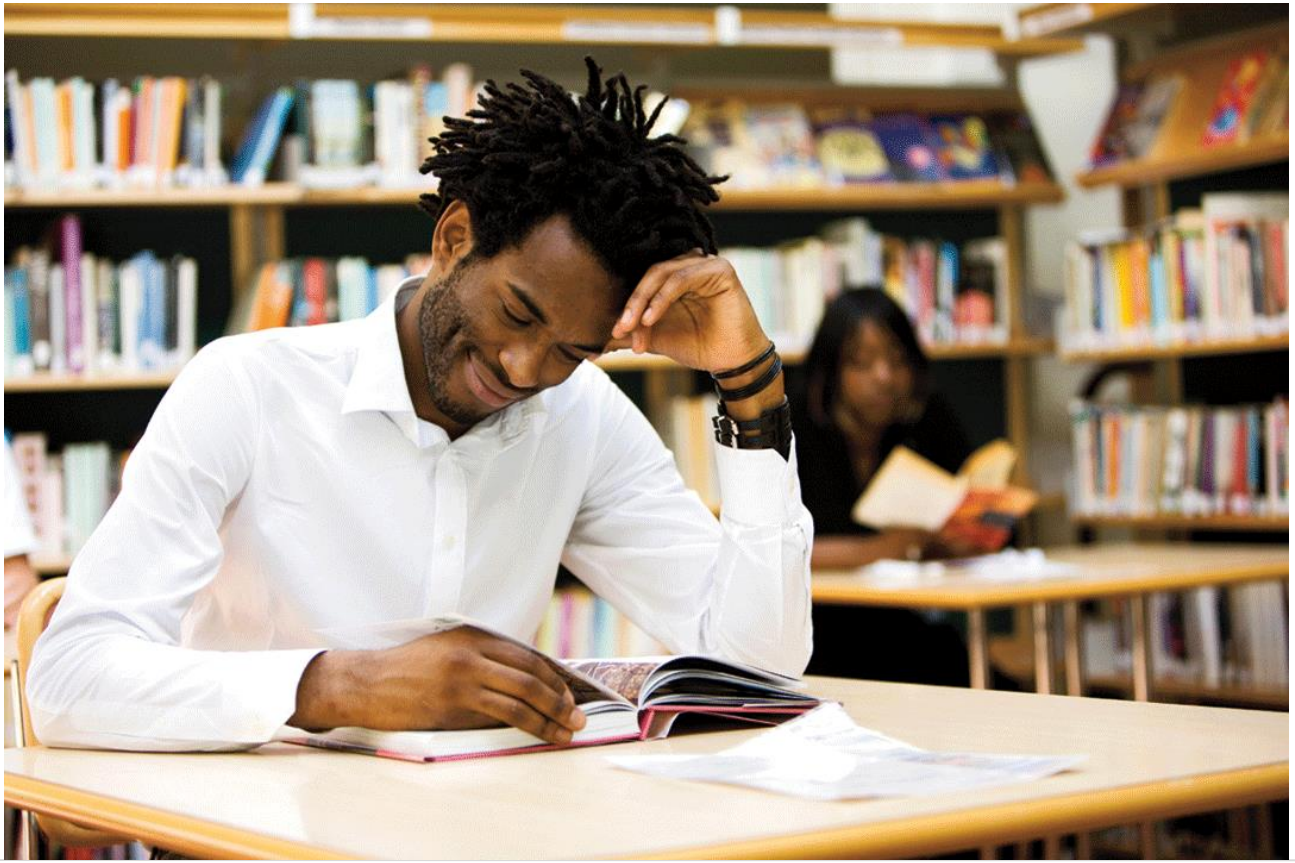
WHAT IS RENEWABLE CLEANING?

Renewable Cleaning goes beyond ‘Green Cleaning’.

Renewable Cleaning leverage technology instead of traditional methods and chemicals to clean indoor environments, protect public health, and position Georgia Tech as a leader in sustainability.

IN OTHER WORDS…

Renewable cleaning is the safest, healthiest way to maintain our indoor environments.



TECHNOLOGY CHANGES EVERYTHING

THEN

NOW

LEVERAGE ADVANCED RENEWABLE TECHNOLOGIES

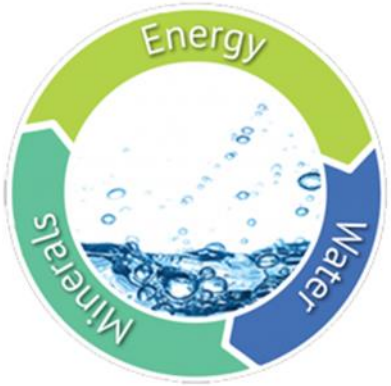
Orbital Walk Behind and & Square Scrub Floor Machines uses Ionize Water to create cleaning solutions

On-Site Generating (OSG) devices for creating general purpose cleaning, sanitizing and disinfecting solutions on-site

Evolution of Technology

On-Site Generating Technology

- GenEon is one of the few companies **awarded an EPA Registration Number as a Broad Spectrum Disinfectant**
- Powerful solution that is 80—200 times stronger than bleach, but without the harmful side effects. Thus it is safe for plants, animals
- Solution has been proven to reduce:
  - absenteeism in schools
  - workers comp
- Use to sanitize fruits, vegetables and other foods
- Kill 99.999 of some harmful bacteria in less than 30 seconds
- Portable – no longer relegated to the closet



Evolution of Technology

After a two year evaluation we transitioned our cleaning and sanitizing to GenEon Technologies OSG products :

- They have a products that uses the OSG Technology:
  - From table top models to Wall Mounted units that produce up to 2.5 gallons of solution every minute
  - Portable Model that create solution in large volume anywhere and anytime you need it!
- Solutions are created on-site and used in our own Spray Bottles, Mop Buckets, Powered Equipment

Evolution of Technology

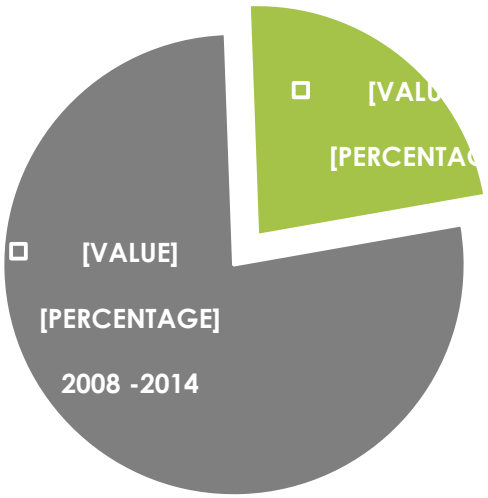
Our program has evolved! We started with Activeion and used those initial success to transform our philosophy, process and methodology by leveraaina technoloav that goes beyond Green!

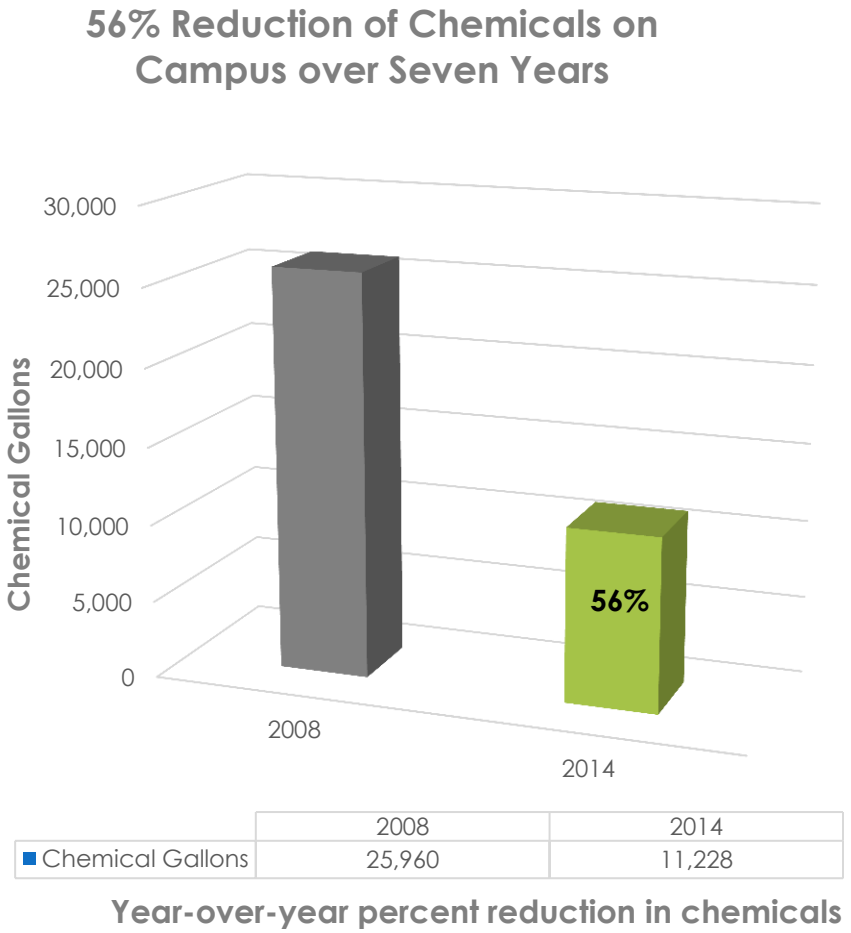
- Cost for Deployment is lower with GenEon
- GenEon cleans the same areas as Activeion, but allows us to do more:
  - Toilet Bowls
  - Showers
  - Floors, etc.
- One University in Georgia was able to remediate a norovirus outbreak using GenEon.
  - Our Animal Life Science Lab is testing the solution

- GenEon creates 3 distinct solutions:
  - Sanitizer/Disinfectants
  - Glass and General Purpose Cleaner
  - Heady Duty Cleaner / Degreaser
- Can generate solution and fill our own spray bottle, mop systems,
- We can validate solutions strengths using test strips

MEASURE RESULTS

Cost Savings From Chemical Reduction

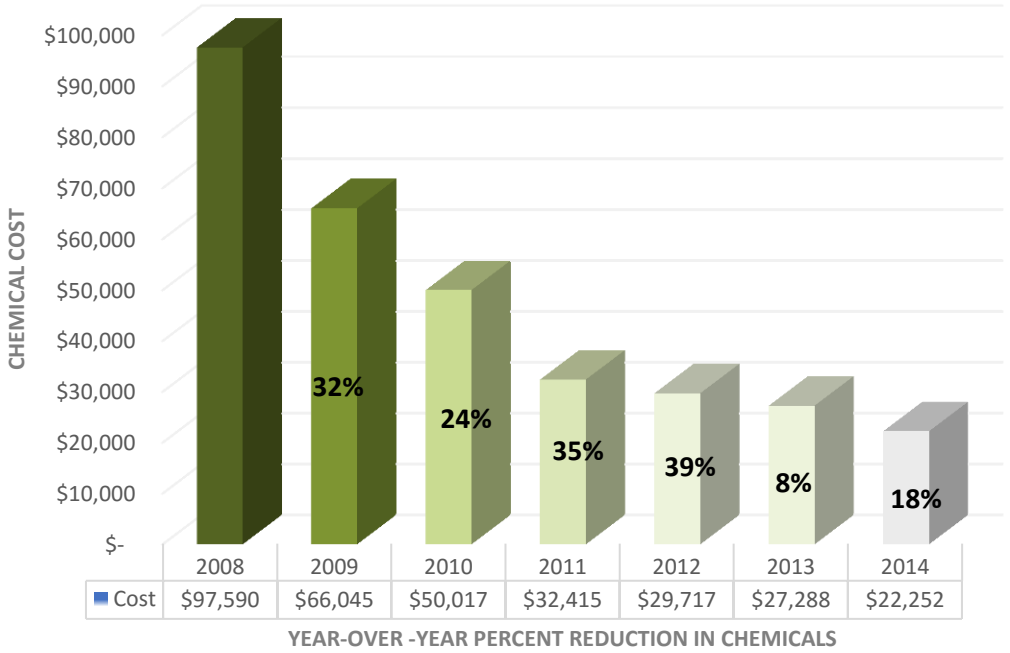




MEASURE RESULTS

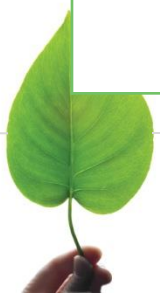
MEASURED RESULTS

- 2008—2014 chemical cost: $683,130
- Savings over seven years: $325,324.



HOW DIRTY IS DIRTY?

Hygiena ATP Levels of Clean (RLU)	
Ultra-Clean Sterile surfaces and food prep areas	**0-10**
Very Clean Critical touch points	**11-30**
Good Clean Floor requirement, and typical microfiber towel performance	**31-80**
Somewhat Dirty Caution: Surface should be cleaned and has some risk of contamination from disease-causing bacteria (typical mopping practices perform in this range)	**81-200**
Dirty Warning: Surface needs cleaning and has medium risk of contamination from disease-causing bacteria	**201-500**
Very Dirty Danger: Surface needs cleaning and has medium to high risk of contamination from disease-causing bacteria	**501-1,000**
Filthy Danger: Surface needs cleaning and has high risk of contamination from disease-causing bacteria	**> 1,000**



MEASURE RESULTS

Conduct comparative efficacy testing.

O'KEEFE BUILDING TEST AREA

	ATP Before[1]	ATP Leading Disinfectant	ATP ionator EXP[3]
Men's urinal	175	2	1
Men's flush valve	24	3	1
Women's toilet	96	4	2
Women's flush valve	83	6	2
Restroom counter top	66	1	0
Training Desktop	145	6	3
Breakroom Table	99	6	3
Telephone	460	40	4
Door handle	87	12	5
Men's Toilet	600	5	0
Computer Table	180	5	1

[1]Indicates bacteria counts.
[2]Popular disinfectant and popular general purpose cleaner were left to sit for at least 10 minutes.
[3]The ionator EXP was sprayed for 6 seconds and immediately wiped.

MEASURE RESULTS

We recently conducting additional studies using solutions generated from GenEon's TRIO Rx and the MIST (the MIST is a Sprayer with adjustable spray pattern from a stream to a fine spray) with the following results:

	AREA TESTED	ATP BEFORE	ATP AFTER
O'Keefe	1st Floor Men's Room - Metal Door Handle	70	7
	1st Floor ROTC - Glass Door Push Panel	674	84
	1st Floor Men's Room - Plastic Paper Towel Hand Roller	602	79
	1st Floor Men's Room - Door Panel	38	9
	2nd Floor Army, Navy, Air Force - Sanitizer Push Panel	175	24
	2nd Floor - Water Fountain Button	1411	79

OUR AWARDS

- Winner of the 2006 National Association of Higher Education Facilities Officers (APPA), “Effective & Innovative Practice Award.”
- Runner up in the American School & University “Green Cleaning Award” in 2007.
- Recipient of the Georgia Tech 2008 Environmental Leadership Award.

OUR AWARDS

- Named to Princeton Review's sustainability Honor Roll in 2008, 2009 , 2010, 2011, 2012, 2013, 2014, 2015 and 2016. Of nearly 700 institutions evaluated on sustainability efforts, Georgia Tech was in the top 15.
- Georgia Tech Green Cleaning Program recognized by National Wildlife Federation (2008).
- Grand Green Cleaning Award American Schools & University
- Achieved Green Seal Certification - 2016

Thank You!

Kimberly Thomas

Executive Director, Plant Services & Custodial Operations, Clarke County School District, Athens, GA

Clarke County School District

"Proud to be GREEN and CCSD"

Kimberly Thomas

Executive Director,
Plant Services & Custodial Operations
Clarke County School District, Georgia

"Kimberly Thomas is responsible for facilities management and custodial operations for the Clarke County School District, winner of the Green Cleaning Award for Schools and Universities' Honorable Mention in 2014. Her department has also received recognition for its commitment to green cleaning and sustainability from the Healthy Schools Network, Environmental Protective Agency- Georgia state office, and US Green Building Council – Georgia division. Prior to her role at Clarke County, she was the Assistant Director of Services for the University of Georgia – Facilities Management Division, which won the Green Cleaning Award's Grand Award in 2010." -

http://greencleanschools.org/green-cleaning-leadership-council/meet/

Unique Issues for Schools

- Increase in asthma and other respiratory ailments
- Use of schools as community facilities
- Increased use of schools for extended day programs
- Summer programs that last 5 to 8 weeks
- Increased scrutiny by parents and Boards of Education
- Pressure to hold the line on expenses

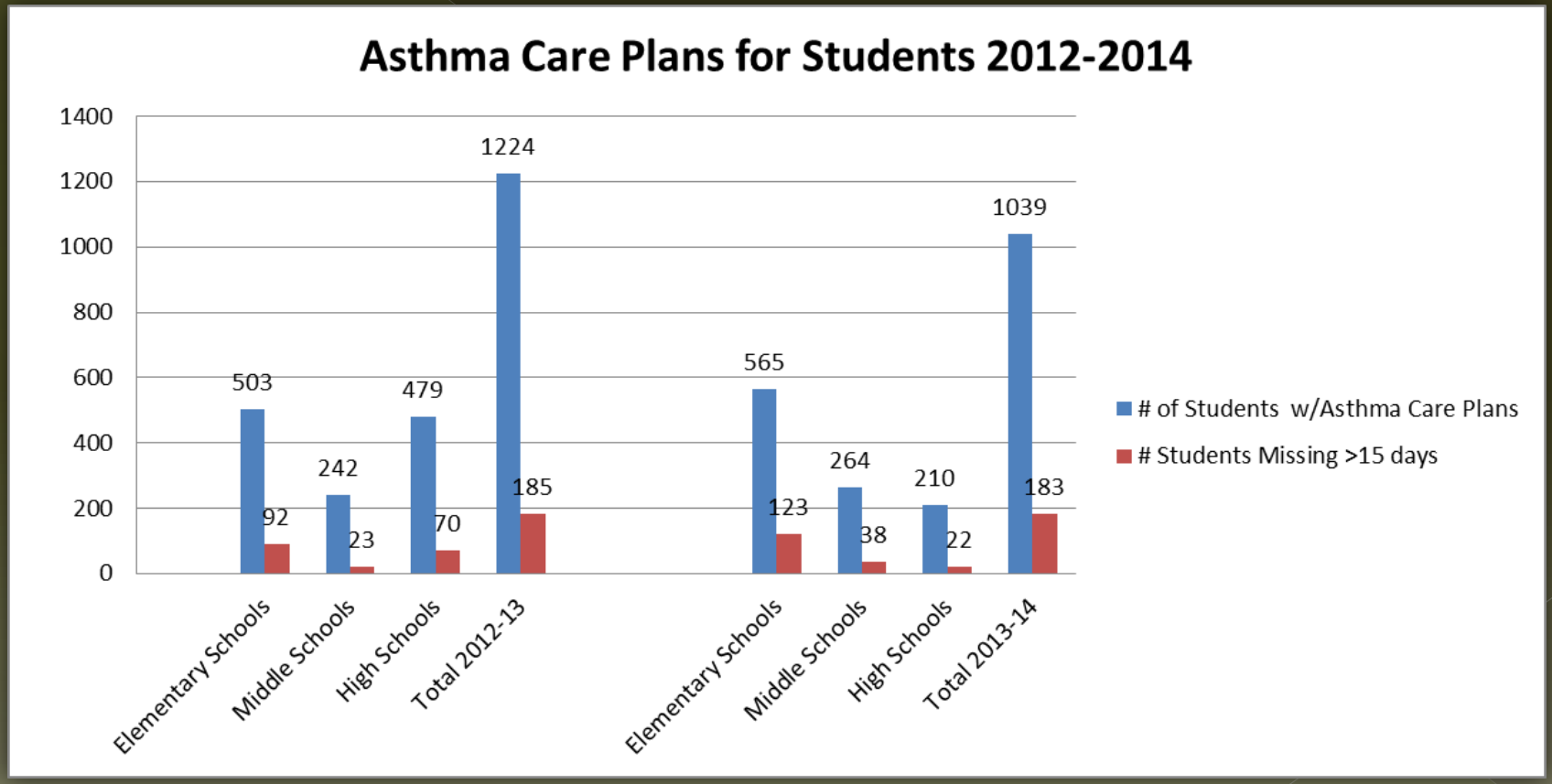
What are we doing?

- **Improve IAQ in school facilities**
  - Quality HVAC systems
  - Control Moisture/Mold
  - Integrated Pest Management

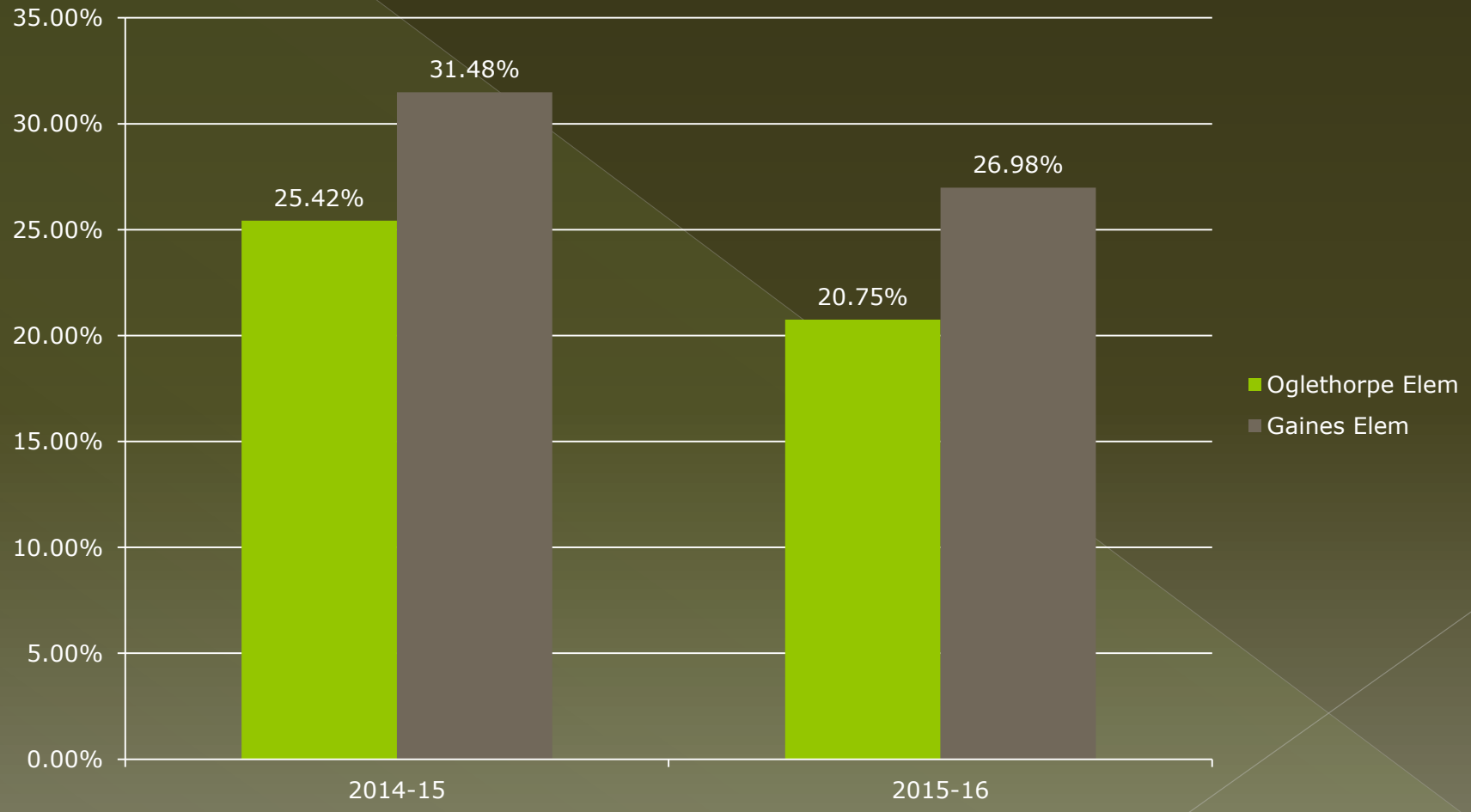
- **Cleaning & Maintenance**
  - Green Cleaning as a Daily Practice
  - Green Purchasing
  - Source Control

- **Effective Communication & Support**
  - Advocates & Cohorts

Asthma care plans in clarke county school district (2012-2014 data)



Pilot program with Air Purification in Learning Cottages



ONGOING PREVENTION EFFORTS

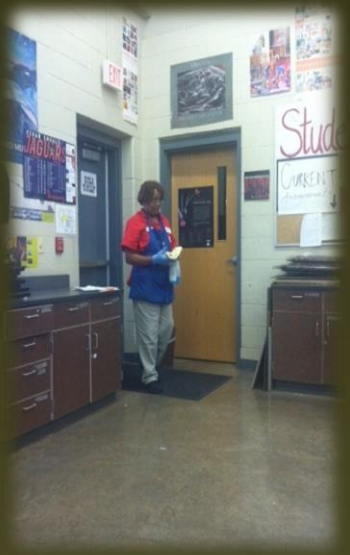
- **Conduct routine inspections of school environment**
  - Safety inspections of entire schools. Look for anything considered "unsafe"
  - Report issues to school principal and leadership team for accountability
  - Weekly building walk-throughs looking for safety issues
  - Regular Chemical Lab inspections and removals

- **Develop a preventative maintenance plan**
  - Assign PM for accountability with date and times.
  - Any PMs that your staff cannot handle could be contracted to outside vendors
  - Monitor PM schedules (web based software or calendar program)

- **Train cleaning/maintenance staff on protocols**
  - Monthly and annual training with team supervisors/ shop training (3x per year)
  - Other training as needed on "professional learning days" or days when students are not in school

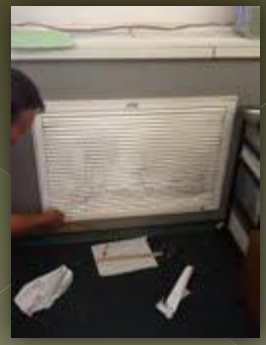
ONGOING PREVENTION EFFORTS

- **Ensure material safety data sheets (MSDS) are available to staff**
  - MSDS notebooks located at all front offices and custodial closets at schools (Head Custodian Office)
  - New policy recommendation that school teachers provide MSDS sheets and inventory list for any products (cleaning, etc.) they bring from home or request parents send to their classrooms (accountability)



- **Clean and remove dust with microfiber or absorbent materials**
  - Microfiber in color coded system
  - Use of 3M Easy Trap duster system

- **Vacuum using high-efficiency filters**
  - HEPA filtration in upright and backpack vacuums and other floor care equipment
  - Internal Policy to purchase energy efficient or environmentally sensitive products as a priority



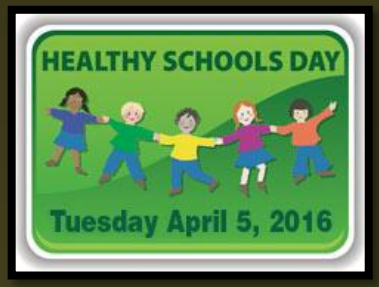
Benefits of Green Cleaning

- *Promotes environmental sustainability*
  - Water
  - Energy
  - Environmental footprint
- *Reduces exposure to harmful cleaning products*
  - Indoor Air Quality
  - Work Safety
    - Reduction in Slips, Trips, and Falls
- *Best Practices*
  - Business Model
  - Streamline equipment and material purchasing
  - Cross train of staff and resources
  - Encourage better communication with stakeholders

Best practices

Green Apple Award 2014 and 2015 for Clarke County School District participation

2014 and 2015 Green Cleaning Award by Healthy Schools Campaign



4th year of participation in National Awareness of **Healthy Schools Day**

MAINTENANCE DIRECT™

Web-based work order management software to track and respond to maintenance requests

HIGH PERFORMANCE HEALTHY SCHOOLS
USGBC–GEORGIA

GREEN CLEANING AWARD
for Schools & Universities

Cited in trade magazines on green cleaning in K-12 schools

Contact Information:

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Clarke County School District
Athens, Georgia

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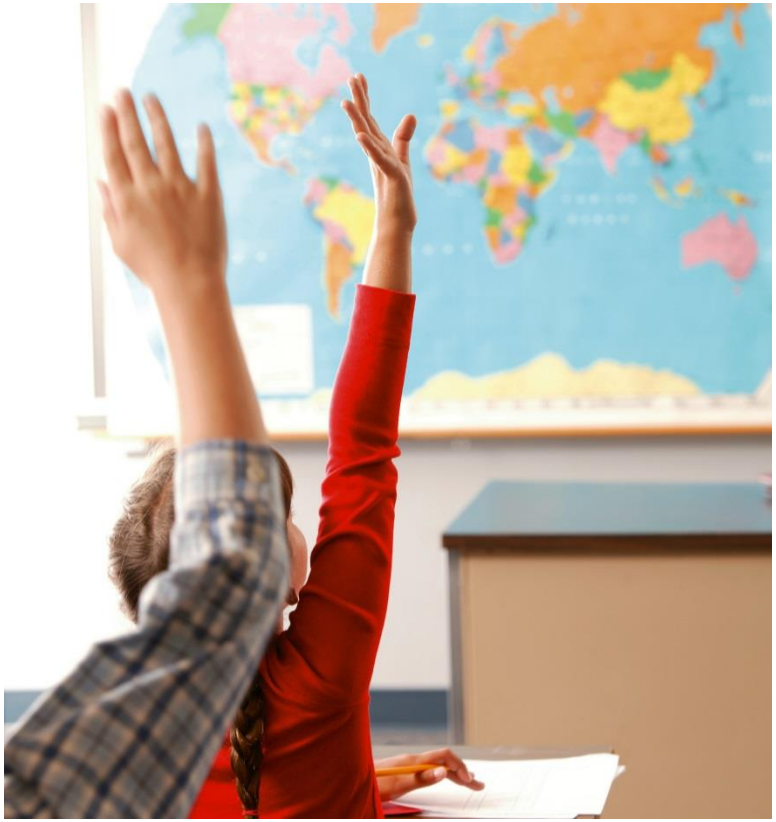
Q & A



If you think of a question later, tweet it!

#greenclean

Join us for our next the Green Clean Schools Leadership Institute…

Go to:

greencleanschools.org/events/institute

Receive 25% off your registration fee until June 24!

Thank you!

healthyschoolscampaign.org
greencleanschools.org

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