Infection Control In our Schools

Presented by:

Green Clean Schools
September 8, 2015

healthy schools campaign

Logistics

- Webinar will run approx. 1 hour
- A recording of the webinar will be available online
- Please take 2 minutes to complete the survey at the end

Join the Discussion!

- Follow @healthyschools for the latest on our schools, environment, and education.
- Tweet #greenclean to share your thoughts!

Q&A Session

- Q&A will be held during the final 15 minutes
- Ask questions through “chat” in the lower right side of your screen

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GREEN CLEANING AWARD
for Schools & Universities

asumag.com/green_cleaning_award

…or just search for "green cleaning award"

AMERICAN SCHOOL & UNIVERSITY

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About Healthy Schools Campaign

What is Green Cleaning?

Cleaning to protect health without harming the environment

Why do we care about green cleaning?

1. Helps students stay healthy and learn
2. Protects the health of custodial staff
3. Increases the lifespan of facilities
4. Preserves the environment
5. Fiscal responsibility

Green Clean Schools

- 5 Steps To Green Cleaning
- National Summit
- Leadership Council
- Education
- Quarterly newsletter
- Web Resources

www.greencleanschools.org

Green Clean Schools Participating Organizations

- American Federation of Teachers
- American Association of School Administrators
- Association School Business Officials International
- Council of Educational Facilities Planners International
- Green Cleaning Network
- International Sanitary Supply Association
- National Association of Charter School Authorizers
- National Association of School Nurses
- National Association of State Boards of Education
- National Clearinghouse for Educational Facilities Planners
- National School Plant Management Association
- Parents for Public Schools
- Public Education Network
- And more!

Infection Control in a Green Cleaning Program

1. Education & Hygiene
2. Effective cleaning
3. Sanitize when necessary

Today's Speakers

Kelly Arehart
Senior Manager, Global Innovation
Kimberly-Clark Professional

Mervin Brewer
Assistant Custodial Supervisor
Salt Lake City School District

Mike Jones
Director of Custodial Services
Columbia Public Schools

2014 Green Cleaning Award Winners

Grand Award: Green Cleaning Excellence
University of Washington, WA

K-12 Winners:

First Place
Blue Valley School District, KS

Honorable Mention: New Program
Clarke County School District, GA,

Honorable Mention: Sustainability
Virginia Beach City Public Schools, VA,

College/University Winners:

First Place
University of Michigan, MI, Plant Building & Ground Services

Honorable Mention: Evaluation
Stony Brook University, NY

Honorable Mention: Sustainability
University of Minnesota, Duluth, MN

Kelly Arehart

Kimberly Clarke Professional

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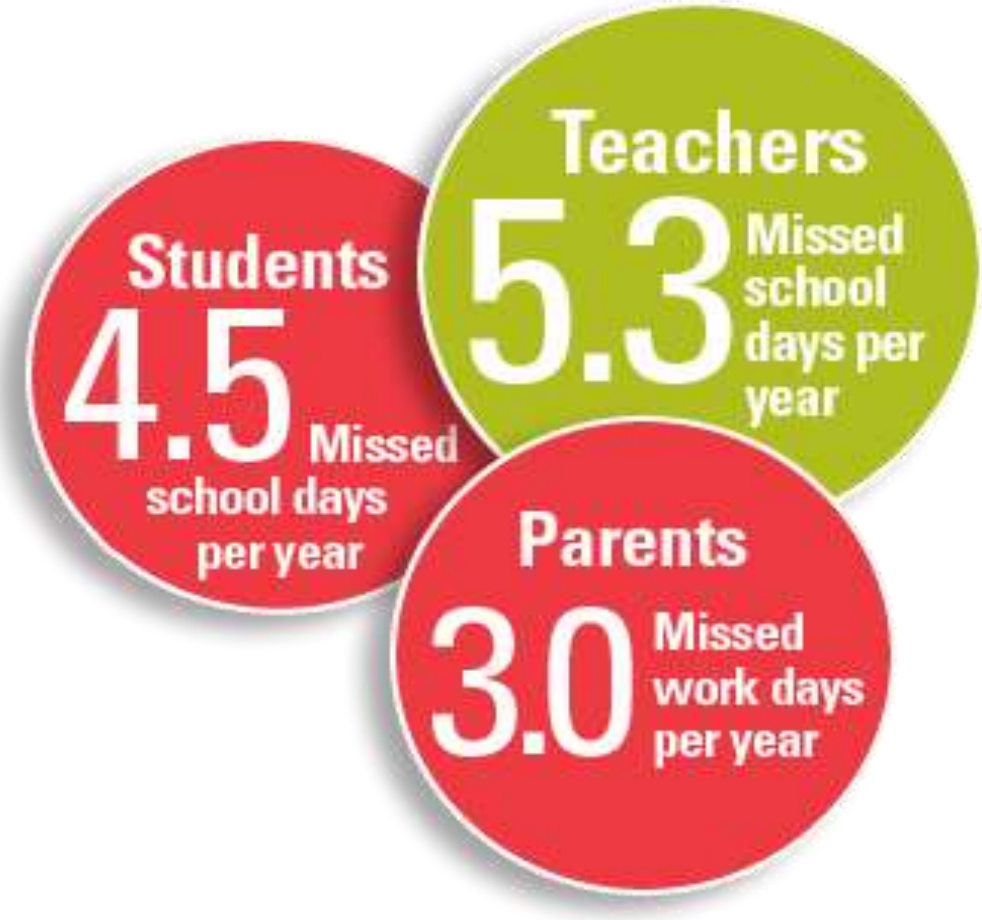
The Healthy Schools Project*
To Do Well, Students Have To Be Well.

WHY? Absenteeism in School



The Healthy Schools Project*

Chain of germ transmission

A simple sneeze or cough generates germ-laden droplets that contaminate **hands** and nearby **surfaces**

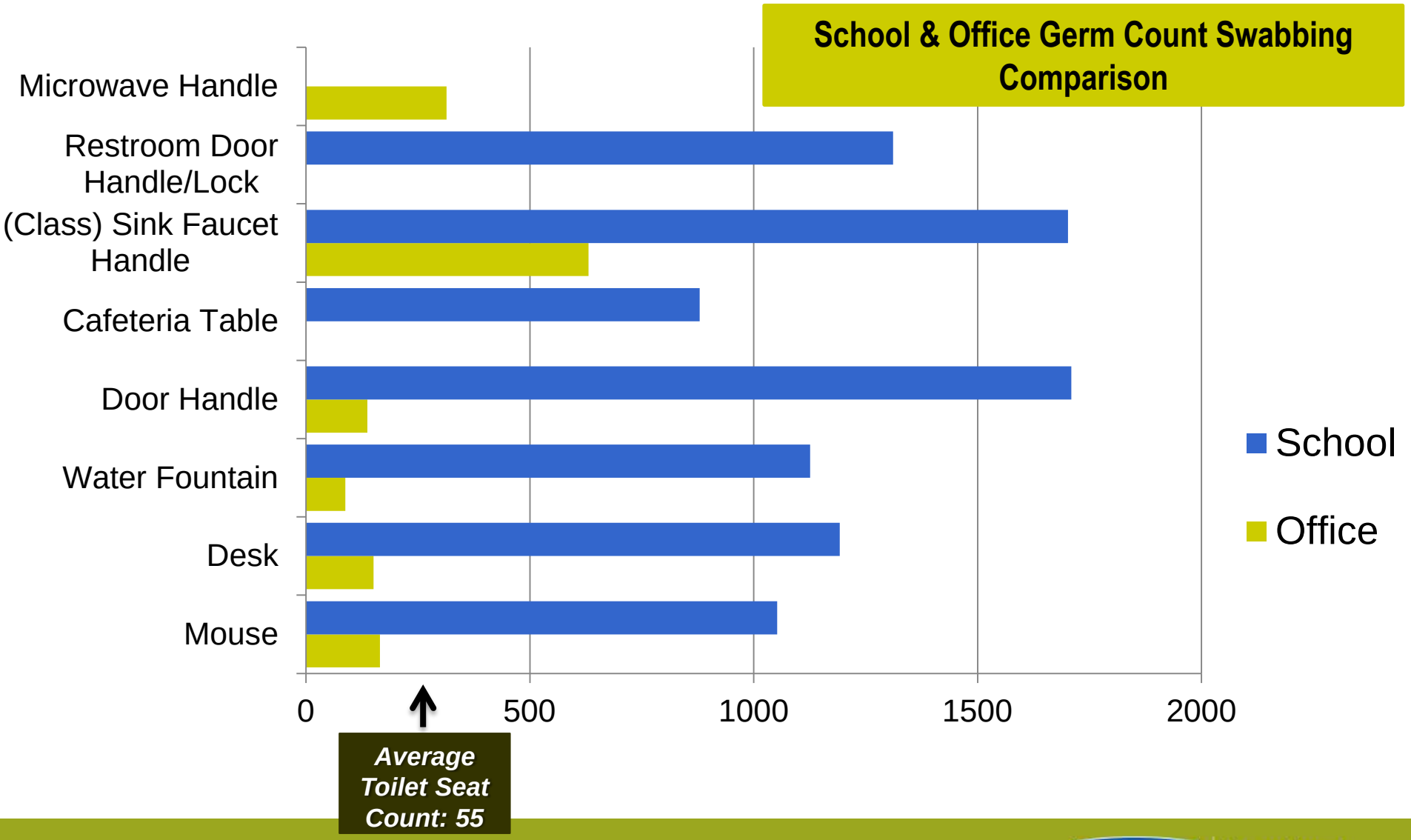
Germs are easily transferred directly **via hand contact**…

…or indirectly through contact with **shared surfaces**

Touching eyes, nose and mouth with contaminated hands allows germs to get inside the body, where they can cause illness

The Healthy Schools Project*

Surface Contamination Measurements



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Results from hand hygiene intervention programs:

- FedEx showed a **21% reduction in absenteeism**[1]
- Boulder, CO College students had **43% fewer missed school/work days**[2]
- Elementary school **absences were 50.6% lower** and **secondary GI-illness rates were significantly lowered**[3]
- Day care families had **a 60% reduction in risk of catching a GI-illness from a child**[4]
- At a UK call center, **absenteeism was reduced by 45%**[5]

[1] Arbogast J, Yaussy CF, Cartner T. Evaluating effects of an alcohol hand sanitizer program on employee absenteeism: pilot results. Skin care science & technology development. GOJO Industries, Inc. [2]White C, Kolble R, Carlson R, Lipson N, Dolan M, Ali Y, Cline M. The effect of hand hygiene on illness rate in university residence halls. University of Boulder Co. GOJO Industries, Inc. [3]Guinan M, McGuckin M, Ali Y. The effect of a comprehensive handwashing program on absenteeism in elementary schools. Am J Infect Control. 2002 Jun;30(4):217-20. [4]Sandora TJ, Taveras EM, Shih MC, Resnick EA, Lee GM, Ross-Degnan D, Goldmann DA. A randomized, controlled trial of a multifaceted intervention including alcohol-based hand sanitizer and hand-hygiene education to reduce illness transmission in the home. Pediatrics. 2005 Sep;116(3):587-94. [5]http://www.businesswire.com/portal/site/home/permalink/ ?ndmViewId=newsview&newsId=20100617005464&newsLang=en. Accessed June 27, 2010.

WHAT IS THE HealthySchools PROJECT*?

A health & wellness program designed to maximize student, teacher and staff attendance and improve overall school image

THE HealthySchools PROJECT*

Super Germ Fighters

4 Key Influencers on Behavior Change:

1. Communication (Clings & Posters)
2. Accessible Product Solutions in Class
3. Proper Education/Protocol (Lesson Plans)
4. Peer Influence/Reward (SGF Stickers/Team Dynamic)

Super Germ Fighters

Super Germ Fighters

3-5 MISSION: PASS IT ON

OVERVIEW & PURPOSE:

Teach children about one of the ways germs can get onto hands, and how to properly wash their hands to help remove them. We can get germs on our hands many different ways. One way is by handling/touching something that has germs on it. Once germs are on our hands, we can spread them to other things or other people by touch. Today we are going to discover one of the ways we can get rid of germs once they're on our hands.

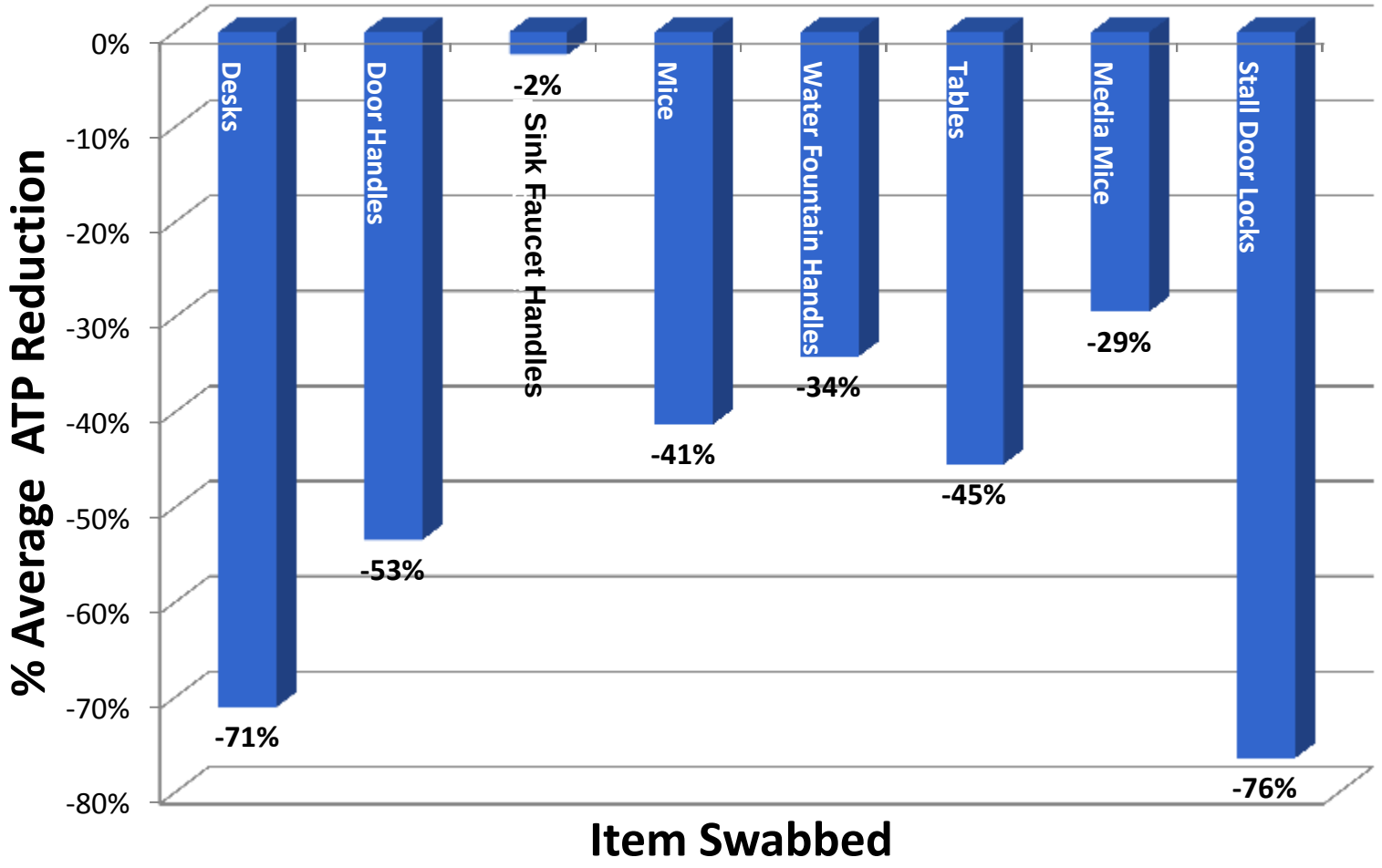
OBJECTIVE:

Students will learn how germs can get on hands when handling a "germy" object, which has been "contaminated" with Glo Germ™ Powder as a proxy for germs. Students will discover how many "pretend germs" are left on their hands after washing the way they typically wash them, and will then learn proper hand-washing skills required to more effectively remove germs from hands.

MATERIALS NEEDED:

- Glo Germ™ Powder, ball and black light (provided with the Super Germ Fighters Program)
- Soap and water

Overall % ATP Germ Reduction by Location



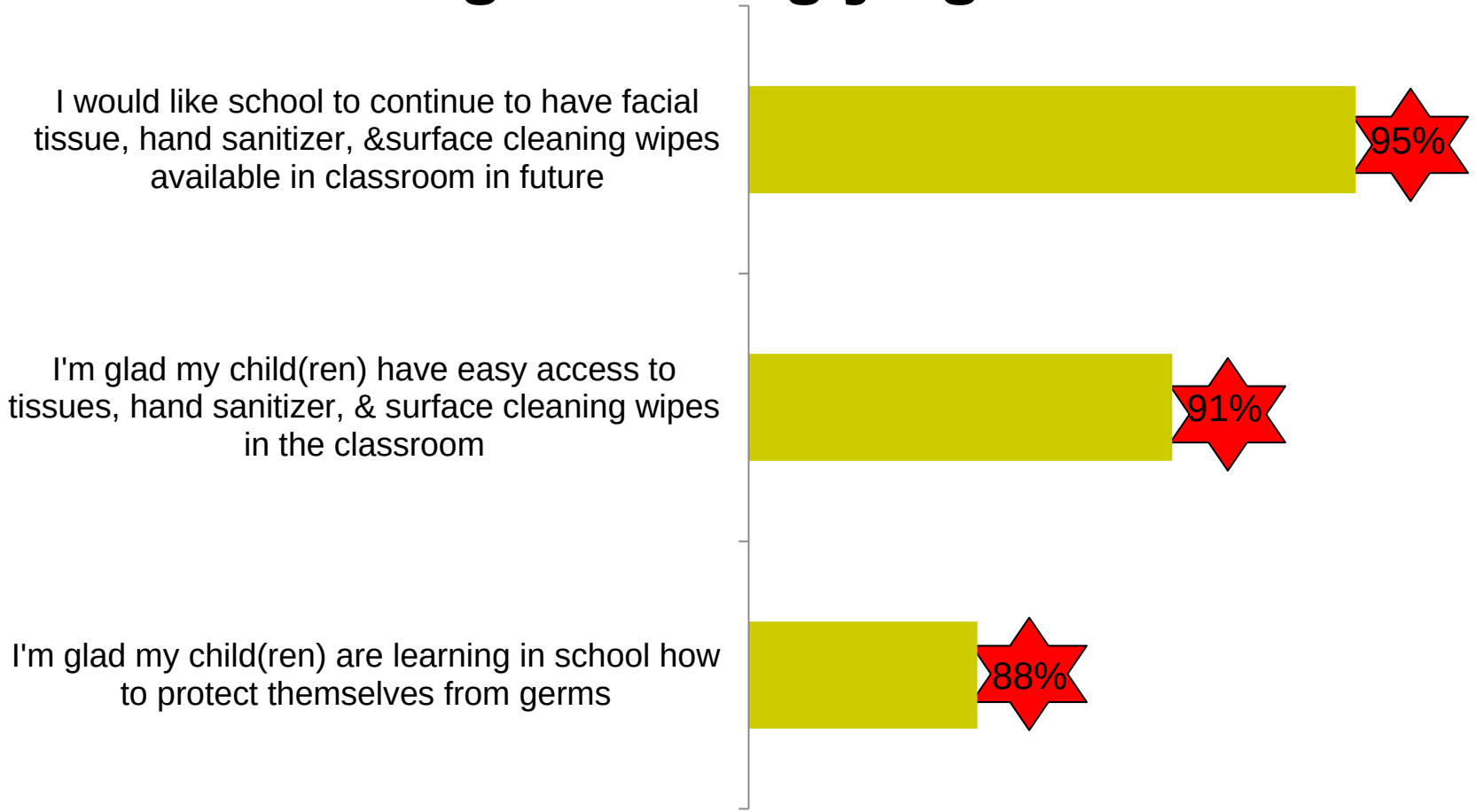
The Healthy Schools Project*

Pilot Results: Teacher Attitudes

I wish my students practiced better hygiene habits	75% -> 64%[1]	Decreased 15% from base Better child habits
My students understand how germs that can lead to illness are spread	12% -> 53%[1]	Increased 4X!! Better child education
My students know what to do to protect themselves from germs that can lead to illness	9% -> 40%[1]	Increased 4X!! Better child education
Super Germ Fighters Program, lesson plans, and products have helped my students to develop an improved routine	50%[2]	Agree/strongly agree Better child habits

[1] Change Wave 1 to Wave 2
[2] Asked Wave 2 only

Agree/Strongly Agree



85% of parents surveyed after the pilot said hand hygiene should be an important part of the classroom lesson plan for their child*

Questions asked in Midyear Survey only, 7 pt. scale
*Asked Wave 2 only

THE HealthySchools PROJECT*

Reducing Germs in School Hot Spots

Changing Behaviors

A recent study by **KIMBERLY-CLARK PROFESSIONAL*** found that, when students learned how to **Wash, Wipe and Sanitize** to break the chain of germ transmission in the classroom, contamination levels were significantly reduced throughout the entire school. After the program had been in place for seven months, contamination levels were reduced by the amounts shown above.

www.thehealthyschoolsproject.com

Kimberly-Clark PROFESSIONAL* | Exceptional Workplaces*

Mervin Brewer

Salt Lake City School District

healthy schools campaign

Green Cleaning & Infection Control

The Salt Lake City School District Experience

September 8th 2015

Custodial Services

About Us

- There are 36 schools in our district. In May 1999, A 10-year construction program began to built schools that were safer, brighter, and can be used as community centers after school hours.
- Our students hail from around the world. Ethnic minorities make up 53% of our students, and the district serves a significant refugee population from Eastern European or African countries. Approximately 60% of our students come from low-income families, and just over 33% of them are learning English as a second language.
- The School District employs approximately 2,840 people, including 1,250 teachers. The district serves approximately 24,000 students, and over 80 languages are spoken in the halls of Salt Lake City schools.

What Is Our Direction?

Our Green cleaning initiatives are to create a teaching environment that is conducive to learning yet provides a level of protection for the occupants health, while reducing impacts on the environment.

We believe in pursuing an effective approach to cleaning for health that relies on the use of easy to follow cleaning practices united with the use of current green technologies and employee training that will allow us to also be environmentally sensitive.

Interesting Tid-bits

- Some interesting bits about schools related to health and cleaning:
  - 25% of the Nation spends their entire day in a school,
  - Bleach while being good for disinfection, is often misused by cleaning personnel. It is frequently improperly diluted , improperly labeled or mixed with other chemicals that can cause dangerous gasses.
  - Salt Lake City 1901: there was a Diphtheria/ Small pox out break in our schools. Medical officers responded by spraying classrooms and books with Formaldehyde gas.

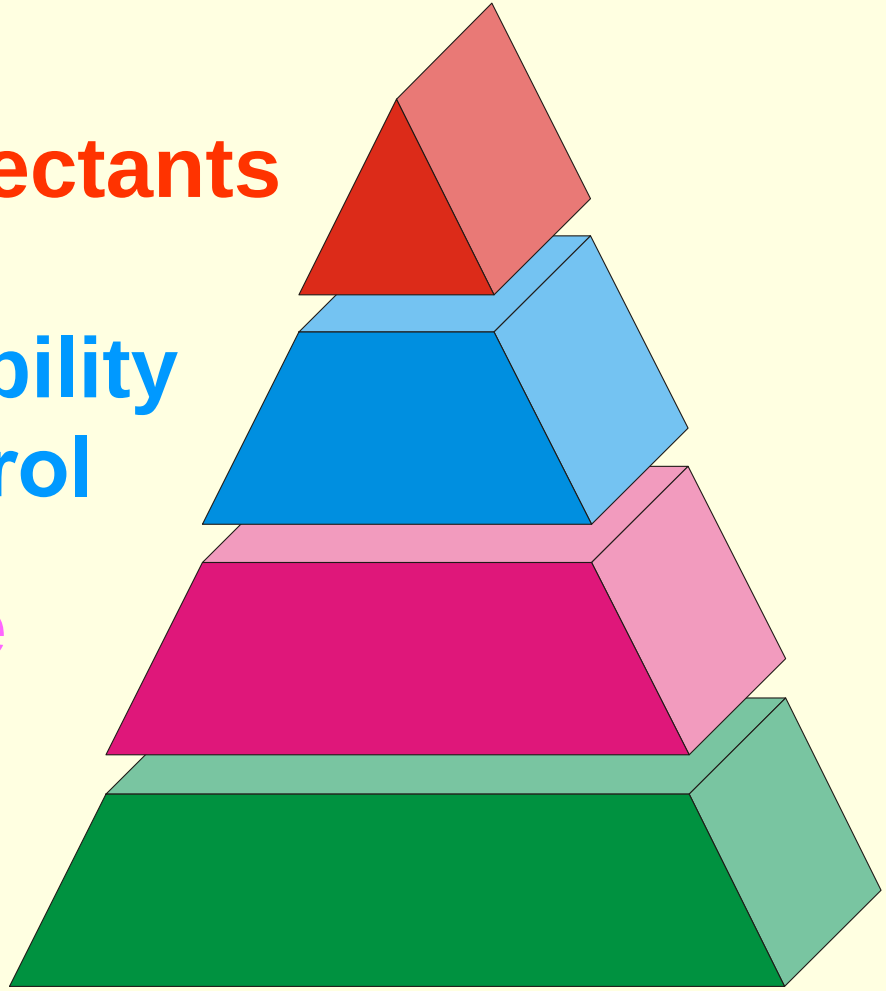
The Practice of Infection Control

Registered Disinfectants

Heightened visibility
"Panic" Control

Cultural Proactive
Cleaning Practices

Education &
Communication



Custodial Training

Our Custodians receive quarterly training in the latest cleaning methods, chemical changes, IPM measures and indoor air quality updates.

Out Break Protocol Training

What is “heightened awareness”

Public perception and “High visibility”

When to use “registered disinfectants”.

How to deal with the press, PRO

Cultural- Back In The Day

Pre- Green

We thought we were doing well but…….

We used bleach 4 times a week and a quaternary disinfectant once a week. Applied by sponge, rag or toilet swab.

Cultural-Back In The Day

We would use part time poorly trained part-time Custodians(youth with their first job) to clean the restrooms.

Classroom doors were cleaned annually!

Latex gloves used by cleaning staff.

Cultural-Back In The Day

Carpets were cleaned once a year with the bonnet- buffer method.

Biological events were cleaned up using dry powder/ sweep method.

Cultural-Back In The Day

- Toxic chemicals
- Poorly applied
- Cross contamination
- Unvested, poorly trained employees
- Latex allergies
- Sticky floors
- Unpleasent odors- Not Healthy!

Cultural-Where Are We Today?

- Since September 2008
  - Well trained career employees cleaning the rest rooms/ locker rooms.
    - Hydrogen-peroxide based cleaner used.
    - Color coded micro-fiber rags and compartmentized buckets used to reduce cross contamination.
    - Foaming hand soap.
    - Monthly District level Inspection program.

Cultural-Where Are We Today?

- Since September 2008
  - High traffic doors/ walls are wiped daily
    - Hard surface cleaners are Hydrogen-peroxide based.
    - Spray bottles of peroxide based cleaners are provided to all classroom teachers for daily desk cleaning.
    - Foaming sprayer heads are used to reduce inhalation of chemicals.
    - Micro fiber rags are used.
    - All cleaning operations done with the use of Nitrile gloves.
    - Non-alcohol foaming hand sanitizer provided at all cafeterias, daycare areas, severly handicap units.

Cultural- Carpet Cleaning

Our carpets are cleaned by the use of a truck mount carpet extractor using mostly peroxide cleaners.

Kindergartens, daycare, and special needs class rooms are cleaned quarterly.

Biological events are extracted immediately. Bacteria eating enzymes are used in this process.

High Risk Times

A stock of" instant kill claim "disinfectant is kept on hand and is ready to be deployed to any outbreak hot spot at a moments notice to meet Risk- Management concerns.

High Risk Times

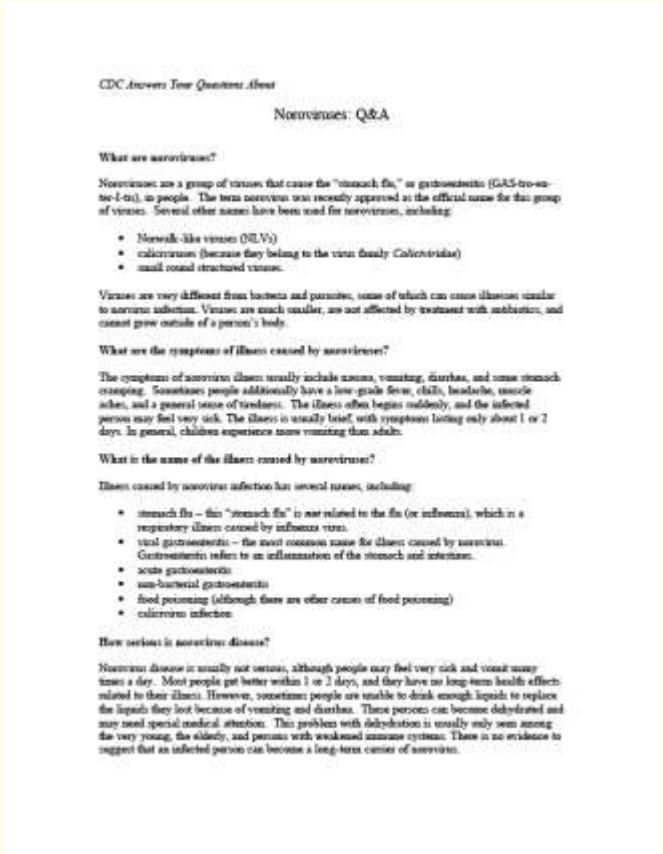
- Media driven concern

- High visibility P.R. and immediate response is critical at this time.

District-Wide Communications

E-mailed reminders to Custodial personnel during heightened awareness times.

Information for parents on infectious diseases is readily available on the district web site.



CDC Answers Your Questions About

Norovirues: Q&A

What are noroviruses?

Noroviruses are a group of viruses that cause the "stomach flu," or gastroenteritis (GAS-tro-en-ter-I-tis), in people. The term norovirus was recently approved as the official name for this group of viruses. Several other names have been used for noroviruses, including:

- Norwalk-like viruses (NLVs)
- caliciviruses (because they belong to the virus family *Caliciviridae*)
- small round structured viruses.

Viruses are very different from bacteria and parasites, some of which can cause illnesses similar to norovirus infection. Viruses are much smaller, are not affected by treatment with antibiotics, and cannot grow outside of a person's body.

What are the symptoms of illness caused by noroviruses?

The symptoms of norovirus illness usually include nausea, vomiting, diarrhea, and some stomach cramping. Sometimes people additionally have a low-grade fever, chills, headache, muscle aches, and a general sense of tiredness. The illness often begins suddenly, and the infected person may feel very sick. The illness is usually brief, with symptoms lasting only about 1 or 2 days. In general, children experience more vomiting than adults.

What is the name of the illness caused by noroviruses?

Illness caused by norovirus infection has several names, including:

- stomach flu – this "stomach flu" is *not* related to the flu (or influenza), which is a respiratory illness caused by influenza virus.
- viral gastroenteritis – the most common name for illness caused by norovirus. Gastroenteritis refers to an inflammation of the stomach and intestines.
- acute gastroenteritis
- non-bacterial gastroenteritis
- food poisoning (although there are other causes of food poisoning)
- calicivirus infection

How serious is norovirus disease?

Norovirus disease is usually not serious, although people may feel very sick and vomit many times a day. Most people get better within 1 or 2 days, and they have no long-term health effects related to their illness. However, sometimes people are unable to drink enough liquids to replace the liquids they lost because of vomiting and diarrhea. These persons can become dehydrated and may need special medical attention. This problem with dehydration is usually only seen among the very young, the elderly, and persons with weakened immune systems. There is no evidence to suggest that an infected person can become a long-term carrier of norovirus.

Custodian's equipped with 2-way communication ensures instant response.

Pest Borne Disease Prevention

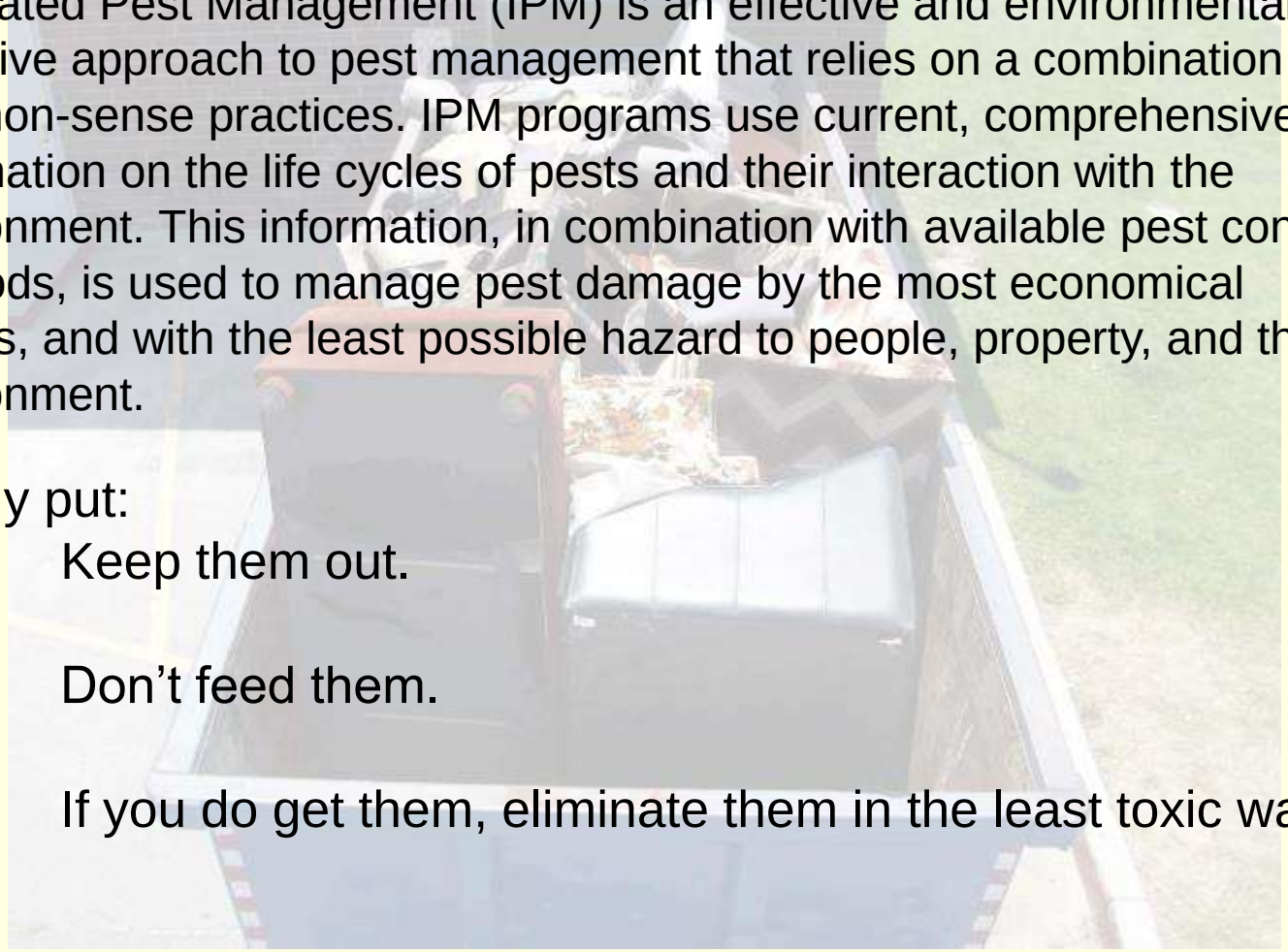
Integrated Pest Management (IPM) is an effective and environmentally sensitive approach to pest management that relies on a combination of common-sense practices. IPM programs use current, comprehensive information on the life cycles of pests and their interaction with the environment. This information, in combination with available pest control methods, is used to manage pest damage by the most economical means, and with the least possible hazard to people, property, and the environment.

Simply put:

Keep them out.

Don’t feed them.

If you do get them, eliminate them in the least toxic way.



What Have We Done?!

- Today, in our school district:
  - Risk of exposure to pathogens carried by "pests" are greatly reduced,
    - Preventive measures are taken in classrooms daily.
  - A reduction of pesticides used in our schools by over 98%. A great added benefit!

What Have We Done?!

- Today, in our school district:

  Constant re-evaluation of new products and cleaning methods to keep the most cost effective, environmentally sensitive, healthiest program we possibly can.

  - Our response to outbreaks
    - Clear, Concise, Rapid
    - As "Green" as possible.
    - Employees Educators and students are no longer exposed to latex or chlorine or other High toxicity products.

Going Green Can Save $$$$$

- Some Green chemicals are less expensive (glass cleaner, graffiti remover)
- Change of process/ equipment combined with a change of chemicals can save labor costs.

The end

Mike Jones

Columbia Public Schools

healthy schools campaign

Columbia Public Schools

Columbia, Missouri

Michael Jones
Director of Custodial Services

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Resources To Help Your Cleaning Program

Missouri *Green Cleaning* Guidelines and Specifications for Schools

Healthy Schools Campaign

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Green Infection Control
What Is Our Concern

- 68% of people wash hands after using the restroom
- Overcrowded classrooms with shared supplies
- Welfare of Custodial Cleaning Staff
- Absenteeism rates of children, teachers, and staff effect student learning
- Absenteeism rates effect financial contributions from state funding formulas

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Green Infection Prevention

- Cleaning and sanitizing “High Touch” Areas
- Training and instruction for proper Hand Washing
- Hand Sanitizer stations in high volume areas
- De-Clutter Classroom spaces
- Shared Responsibility
- District Policy Support
- Proper cleaning tools and equipment
- Strong Custodial Training program
- Communication

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Cleaning and Sanitizing of High Touch Points

- Door knobs, push plates, handles, railings
- Drinking Fountains
- Student Desks and Tables
- Telephones, Pencil Sharpeners, Light Switch Plates
- Sinks and counter tops
- Restrooms fixtures, stalls, walls

<<<<Cleaning is Physical Removal of Soils>>>>

Solution is not stronger chemicals, but more regular treatment of most touched surfaces

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Proper Hand washing and Sanitizer Stations

- Schools must adapt hand washing training of students and staff at beginning of year and on-going throughout the school year
- Alcohol Free Hand Sanitizer stations at building entrances, cafeteria entrances, and playground entrances

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De-Cluttering Classroom Spaces

- Clutter needs to be removed from areas needing sanitized and floor areas to properly vacuum
- If custodians cannot clean an area due to clutter, it does not get cleaned
- If classroom supplies have not been used in a year, it should be removed and re-allocated for other district use

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Green Cleaning that Works

Shared Responsibility

- Chairs Stacked by Students
- Worktops Left Clear
- Clutter/Debris Removed by Students

Conditions After School - Prior To Cleaning

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District Policies
Board of Education Support

- Student Allergy Prevention and Response Policy
- Energy and Environmental Policy
- Integrated Pest Management
- Student based Recycling
- Use of cleaning products and procedures in accordance with recommendations by DESE

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Quality Cleaning Tools and Equipment

- Color coded Microfiber Wipers
- Color Coded Microfiber Flat Mops
- Double Bucket Mop Systems
- Pro-Team Back Packs with Hepa Filtration
- Kaivac Restroom Cleaning Machines
- Scheduled equipment maintenance
- Scheduled replacement of microfiber Products

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Green Cleaning that Works

Squirt, Wipe and Remove

Spray, Rinse and Remove

Education – Training - Resu

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Process Cleaning for Healthy Schools

- Began installation of new program August 2014.
- Standardized cleaning program.
- Concentration on high touch surfaces.
- 36 of 38 district buildings complete.
- Reduced 15 total FTE with no custodial job loss
- Created 2 custodial trainer positions.
- Purchased new microfiber cleaning systems.
- System provides checks and balances to ensure buildings are clean and healthy.

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Proactive Communication

- Scheduled meetings with Superintendents
- Q&A in Principal meetings
- Custodial Cleanliness Inspections
- Random Cleanliness Survey
- District Nurse Coordinator
- Teachers
- Parents
- Community

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High Performance Matting System

- Recycled
- Matting outside, vestibule and inside.

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Recognition

- 2010 EPA's Tools for Schools National Great Start Award
- 7 buildings Received EPA's Energy Star Award
- 2010 Best New Program
- 2011 Grand Award Winner

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Q&A Session

- **Ask questions through “chat” in the lower right side of your screen.**

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Thank you!

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