



Healthy Schools 101: Getting Started with the IAQ TFS Program Charlotte Mecklenburg Schools

8th Annual National Indoor Air Quality Tools For Schools Symposium
Thursday December 6th, 2007



Brian K. Kasher, CET
Manager, Environmental Health and Safety
Charlotte Mecklenburg Schools



Charlotte Mecklenburg Schools

One of 25 largest K-12 districts in USA

- 134,000 Students; 18,925 Staff;
- 161 Schools (94 ES, 32 MS, 25 HS, 10 Special)
- 18.9 Million square feet occupied space
- 630 Buildings; 1250 Mobile Classrooms
- Variety of Indoor Environments and Building Air Delivery Systems with ages ranging from 0 - 100 Years Old



THE HEADLINE EVENT



“Molded in Mistrust”

Parents' Mold Concern Leads to Heightened
Community Concern and School District
Expense Totaling >\$100,000

Cost Factors Extend
Well Beyond
Economics!



CMS Response In Action



- ✓ Joined Tools for Schools Program
- ✓ Instituted 24 Hour Response Protocol
- ✓ Created Written IAQ Management Plan
- ✓ Teamed with University of Tulsa
- ✓ Formally Institutionalized IAQ Program
- ✓ Established the EHS Office And Staff
- ✓ Budget, Year End and Bond Funding for IAQ



USING THE ACTION KIT

- Used to Support Training Programs
- Modified Teacher, Walk-through and Ventilation Checklists for District-wide Implementation
- Distributed to Teachers, Administrators, Nurses, Building Services Personnel, Architects, Engineers
- Implemented District-wide Baseline Occupant Study



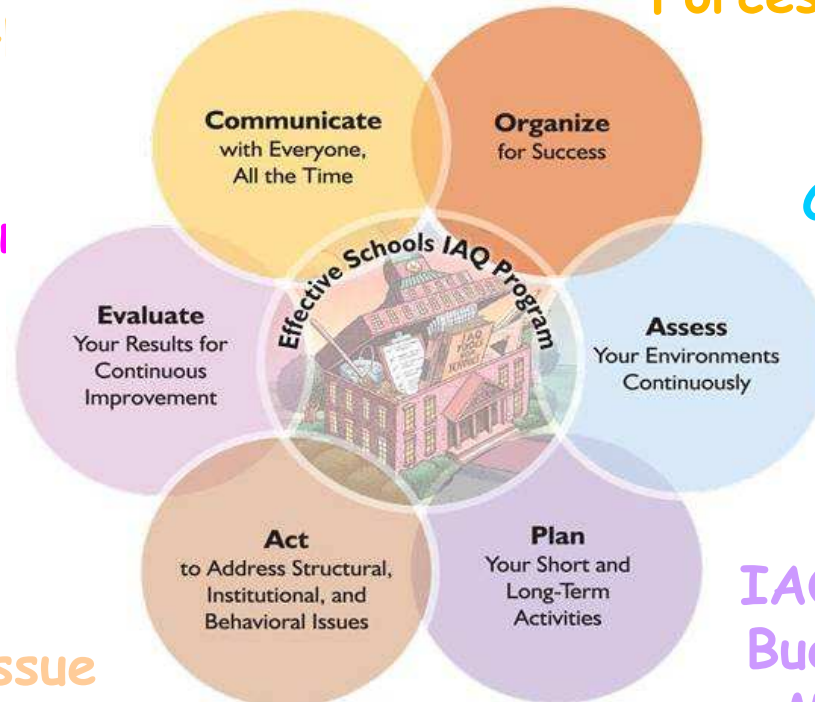
Framework in Action



Meetings, Articles
Newsletters,
Re

Committees, Task
Forces, IAQ Teams

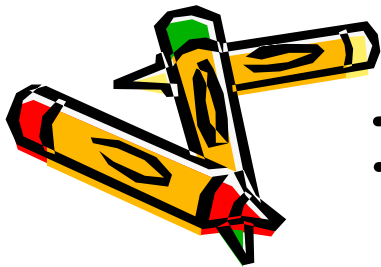
Benchmarks,
Metrics, Trackii
Nurse Visits,
Absenteeism,
Staff Surveys



Checklists, Surveys
Site Inspections,
Visits

Training, Issue
Response, Outreach

IAQ MGT Plan,
Budget, Bonds,
Maintenance



IAQ is Fundamental in CMS Operations



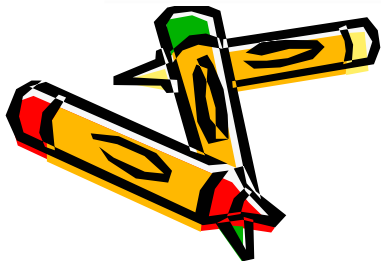
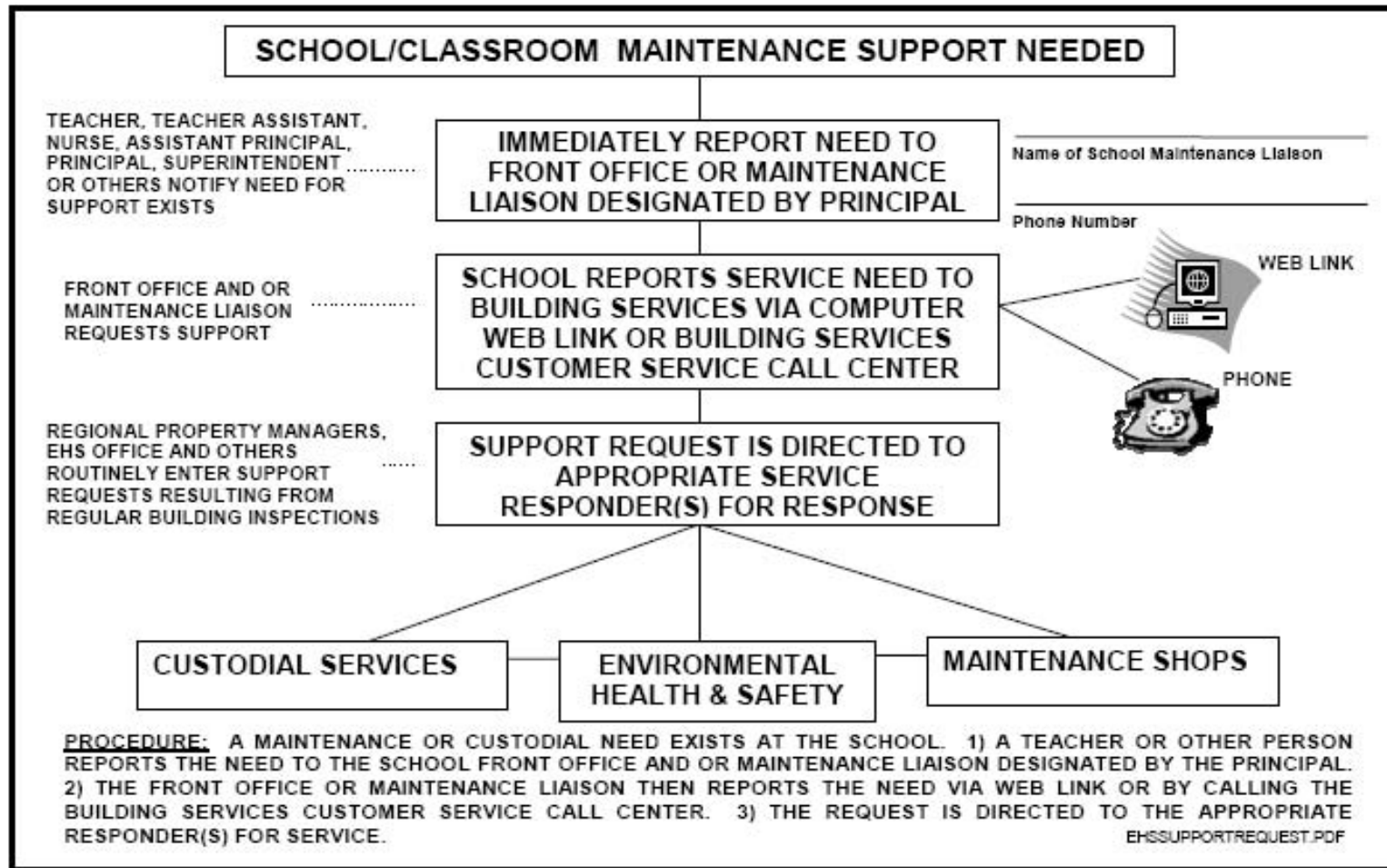
Lesson #1 IAQ Awareness

Develop the Understanding that Poor IAQ may:

- Increase student-teacher absenteeism
- Decrease learning, concentration and memory
- Reduce student-teacher-staff performance
- Result in Asthma attacks, respiratory system infections, allergic reactions, lethargy
- Increase Community Concerns and Scrutiny



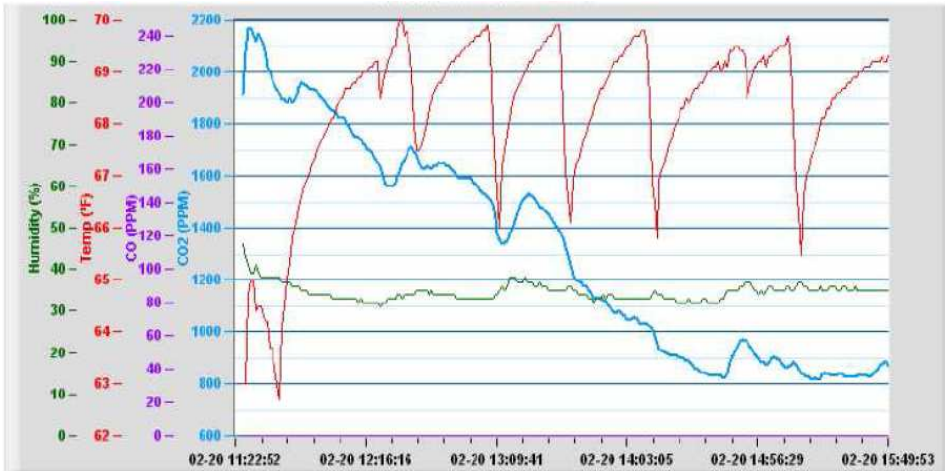
BUILDING SERVICE SUPPORT REQUEST PROCEDURE



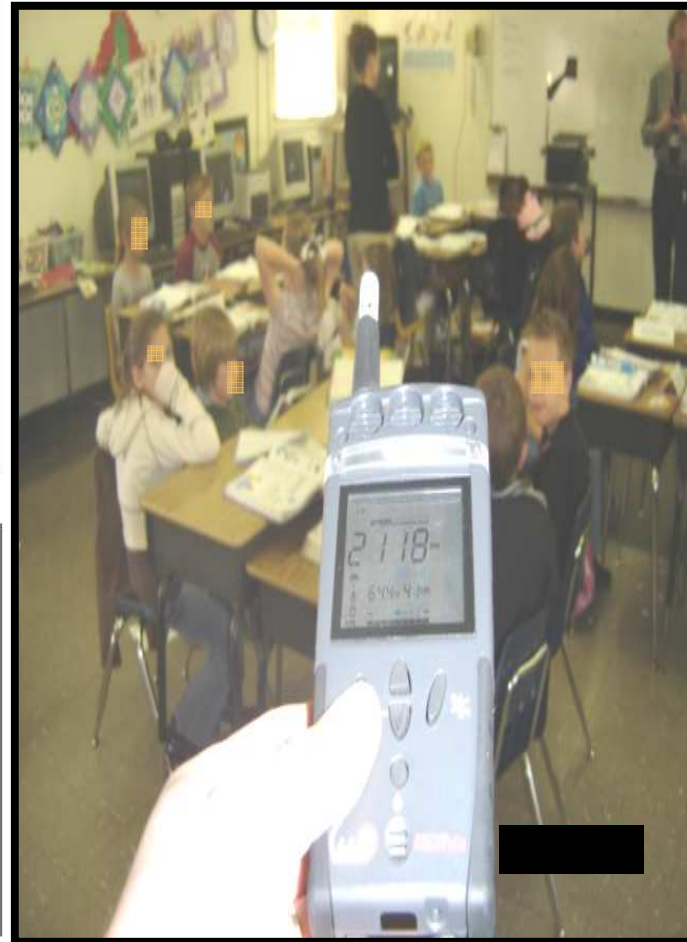
Lesson #2 Keep it Simple



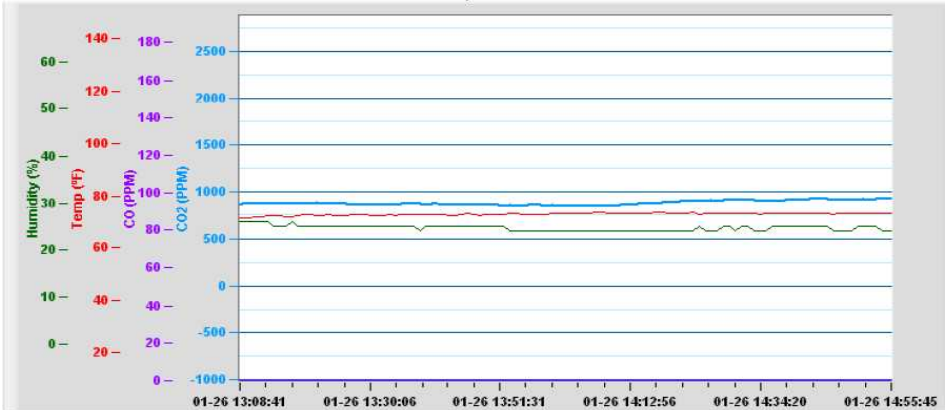
Lesson #3: Basic Survey Skills are Key



Unstable classroom environment



Carbon Dioxide
Testing Instrument

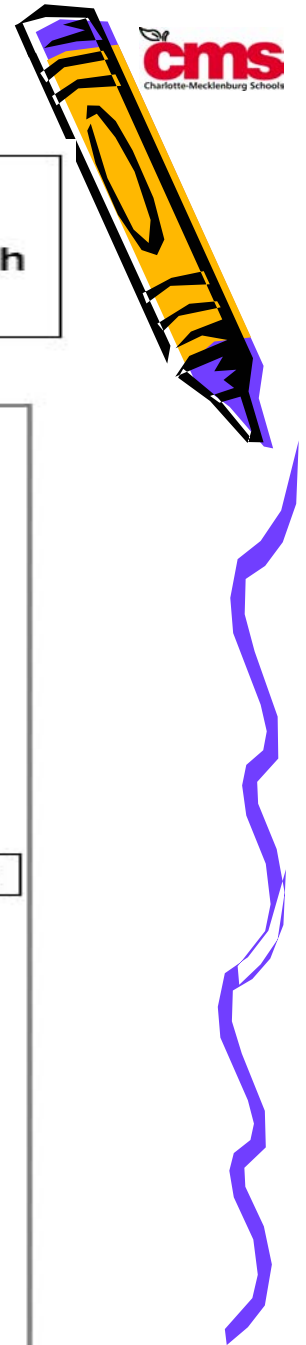


Stabile classroom environment

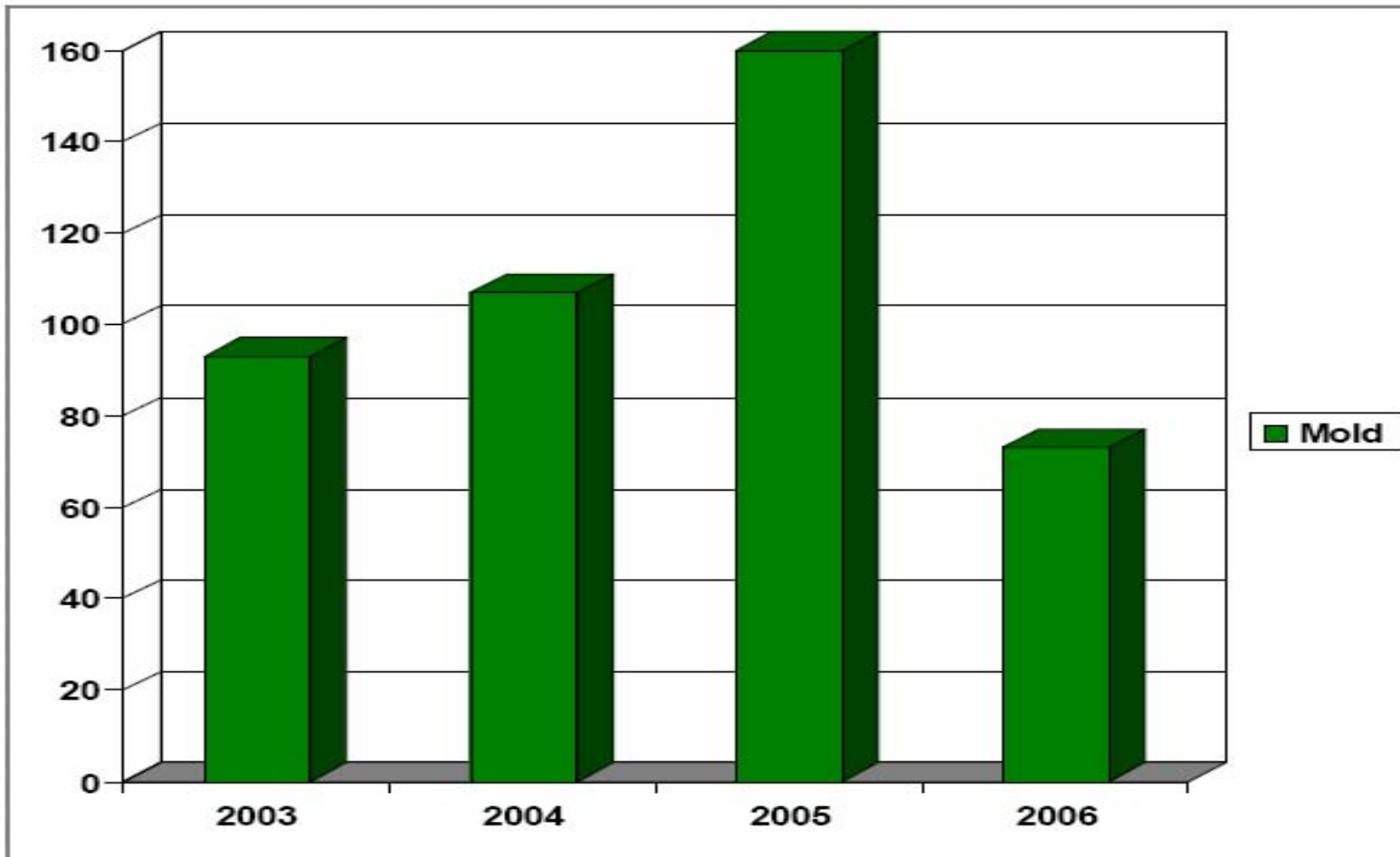


Basic Instrumentation is not Required but does add to the District's Ability to Identify Issues Early and Respond Promptly

Lesson #4: Good Fundamentals Pay



IAQ Summer Energy Management Program Integration
Mold Issue Frequency June 1 to September 30
Number of Mold Issues Decreased 54% Under Previous Year although
Awareness Level Has Increased (Positive Trend)



Data from CMS System MP2 Computer Tracking