

# Indoor Air Quality in Schools

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# Healthy Schools Campaign

- Mission: to advocate for policies and model programs that allow students and staff members to learn and work in a healthy school environment.
- Program areas:
  - Environmental Health
  - School Food



# A new issue right?

- “In the construction of buildings, whether for public purposes or as dwellings, care should be taken to provide good ventilation and plenty of sunlight... school rooms are often faulty in this respect. Neglect of proper ventilation is responsible for much of the drowsiness and dullness that... make the teacher’s work toilsome and ineffective.”
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– Health Reformer, **1871**

# Illinois Legislative Initiatives - 2004

- HB 4396 – Create regulations for mold professionals
- HB 6717 – Create exposure limits for mold
- SB 2194 - Require school districts to have IAQ policies
- HB 4444 – Allows HLS funding for bleacher safety, air conditioning and IAQ programs

# Why is IAQ Important?

- Americans spend 90% of our time indoors – classrooms, offices, home
- Pollution indoors is regularly 2 to 5 times – and occasionally more than 100 times – higher than outdoor levels



# IAQ in Schools

- Illinois schools are in need of more than \$9 billion in facility improvements
- 70% of schools in Illinois have at least one major environmental issue in need of repair
- Average age of public school buildings is 42 years old



# Why is IAQ in Schools Important?

- Asthma and other health affects
  - 800,000 Illinois residents suffer from asthma
  - Number one cause of preventable school absenteeism
  - Triggers include: mold, dander, mites, dust
  - Lung irritants: chemicals, off gassing, odors, fragrances
- Education as a priority
- Public investment
- School funding



# State Funding

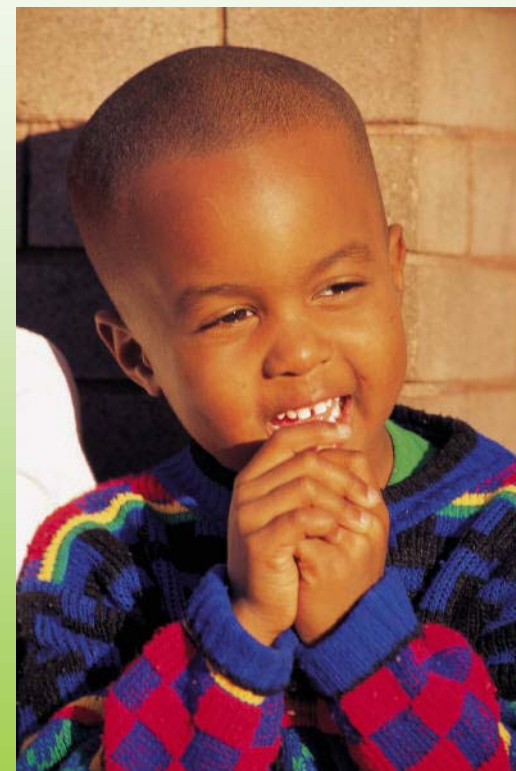
School District	Type of Grant	Total Students	2001 ADA	Net GSA	Adjusted ADA	Adjusted GSA	Difference
School District 150	Foundation	14,889	92.7%	\$30.0 million	<b>93.7%</b>	\$30.7 million	\$698,003
School District 99	Foundation	13,276	88.0%	\$39.0 million	<b>89.0%</b>	\$39.6 million	\$618,890
School Dist 39	Alternate	3,541	95.9%	\$1.0 million	<b>96.9%</b>	\$1.0 million	\$13,889
School Dist 27	Flat	1,282	96.1%	\$0.3 million	<b>97.1%</b>	\$0.3 million	\$2,839

# Possible Health Affects

- Increasing spreading of illness
- Coughing, bronchitis
- Asthma
- Headaches
- Allergies
- Carbon Monoxide

# Major Causes of Poor IAQ

- Pollution Sources
- Improperly designed, operated or maintained HVAC
- Building occupants and their activities



# More Causes of Poor IAQ

- Reduced ventilation
- Building materials and furnishings
- Water intrusion
- Deferred maintenance
- Pests
- Pesticides
- Cleaning agents
- Dirty carpets
- Personal care products

# But What are the Root Causes?

- Lack of awareness of how we all affect IAQ
- Lack of clear communication between school and district staff on issues affecting IAQ
- Lack of awareness of basic knowledge of IAQ in general



# What Are Solutions?

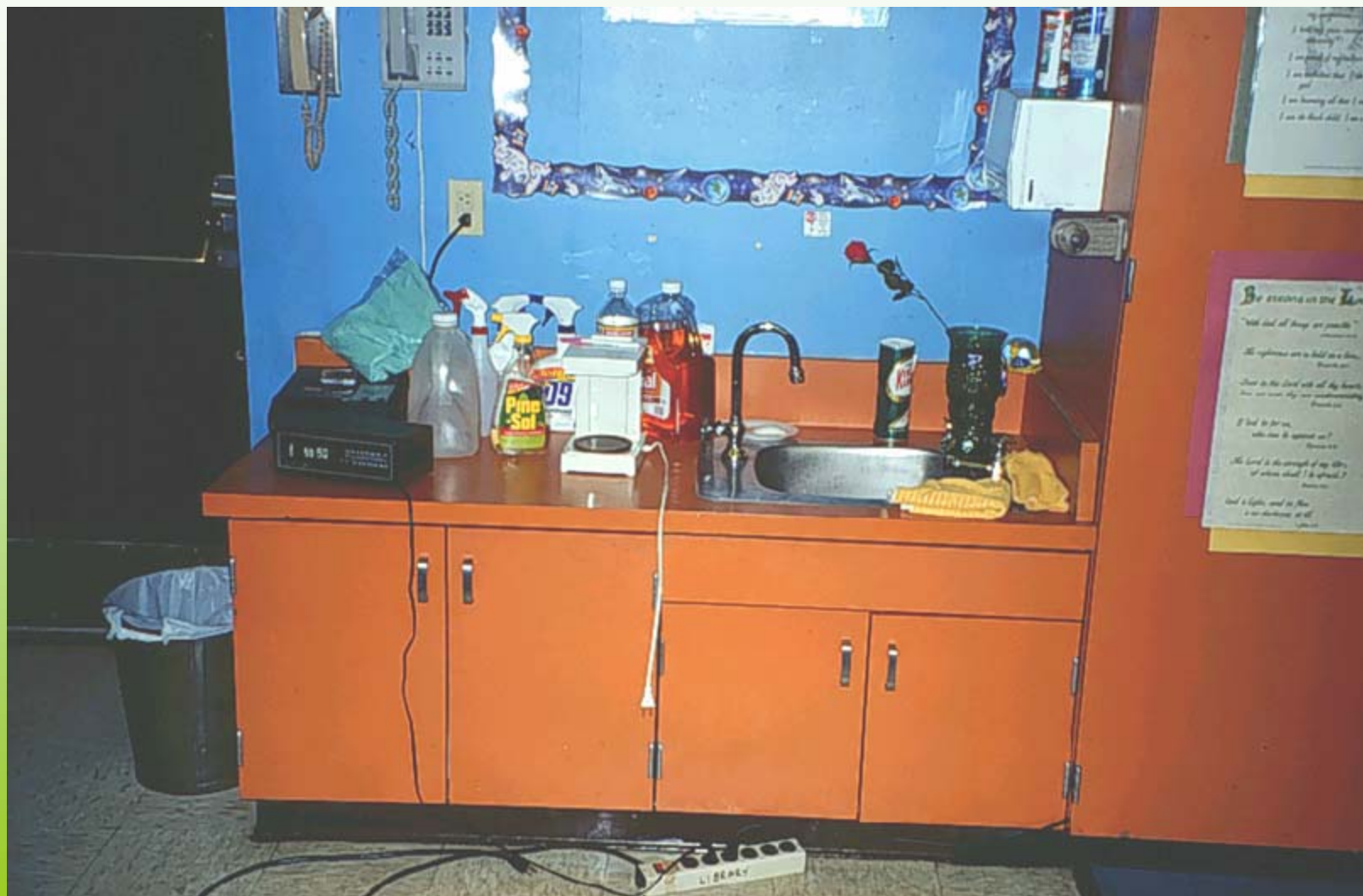
- Education
  - Everyone in your school has to understand the importance of good IAQ
  - Everyone has to understand that their activities can affect IAQ
- Communication
  - Everyone needs to know how to communication about IAQ



# Does this look familiar?



# Cleaning Supplies





# Plants in the classroom



# Leaky ceiling



# Ventilation Unit of Portable Classroom



# Rooftop ventilaion

Outside air intake



Bathroom exhaust

# Blocked Return

For air to come out here

It has to get in there



# Air intakes



# IAQ Tools for Schools

- A response for root causes
- A program for making all school-site staff education and advocates for good IAQ
- A program for the entire school to learn to recognize and prevent IAQ problems
- Voluntary program from EPA
- <http://www.epa.gov/iaq/schools/>