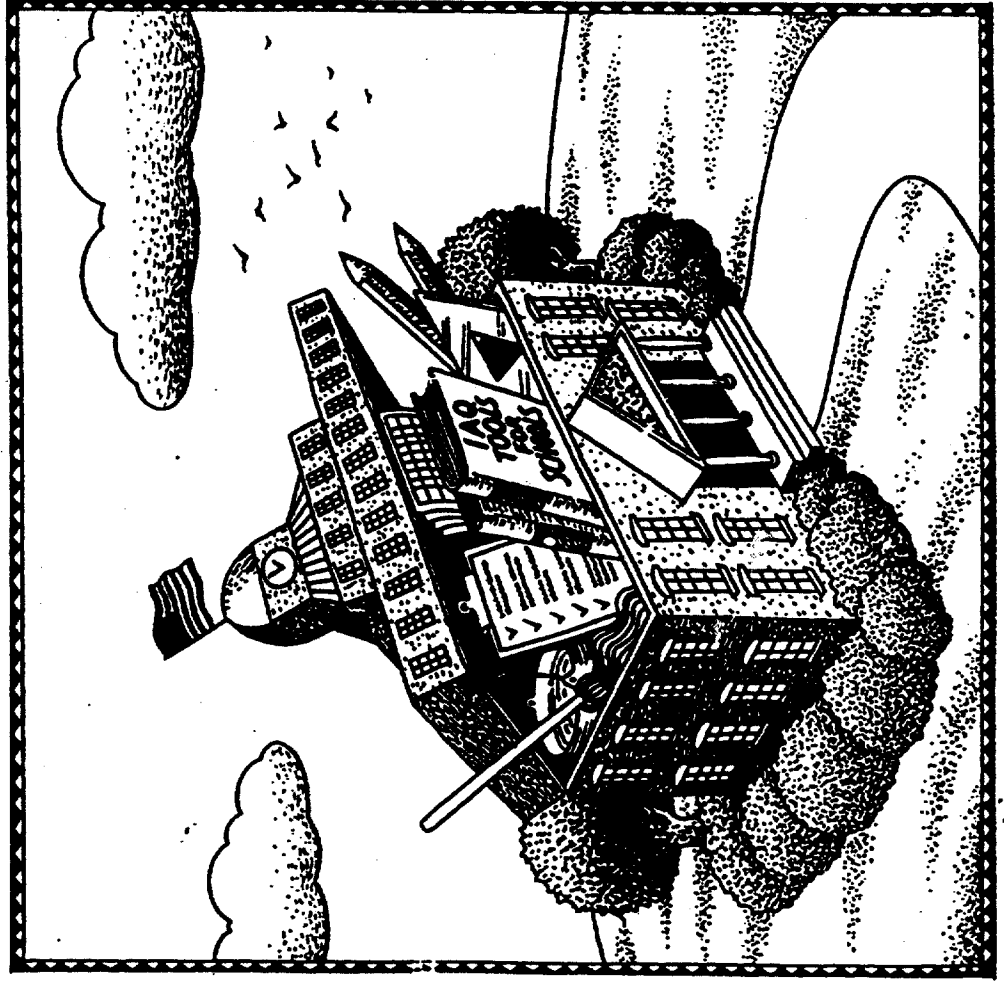
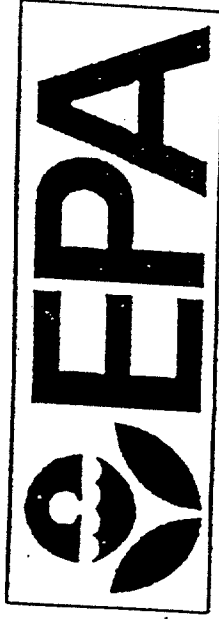


# Indoor Air Quality



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# Tools For Schools

# SCHOOL STUDIES

## Background Information

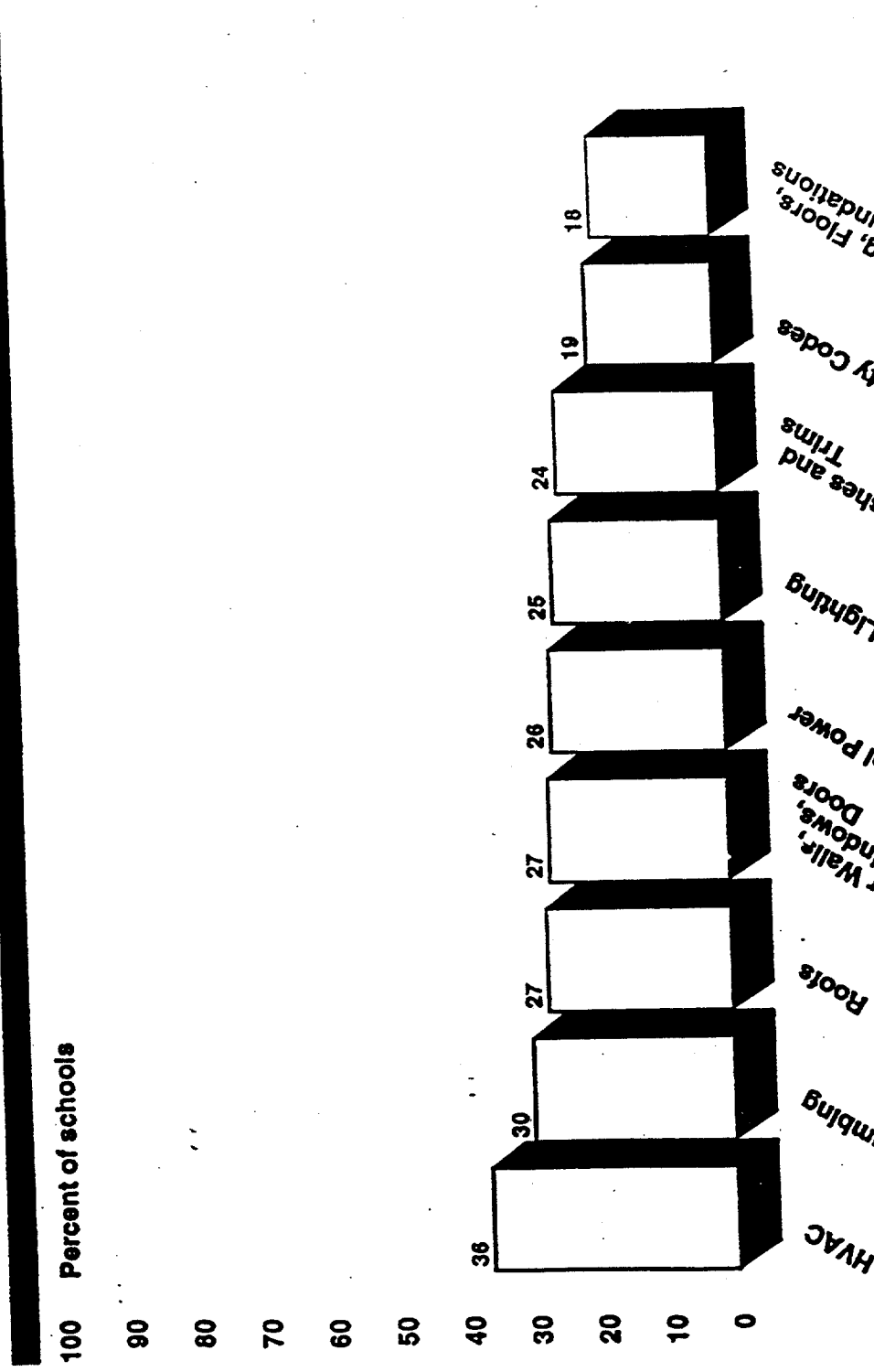
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- WOLVES AT THE SCHOOLHOUSE DOOR: AN INVESTIGATION OF THE CONDITION OF PUBLIC SCHOOL BUILDINGS. Education Writers Association. 1989.
- SCHOOLHOUSE IN THE RED: GUIDEBOOK FOR CUTTING OUR LOSSES. Am. Assoc. of School Administrators. 1992.
- CHARACTERISTICS OF SCHOOL BUILDINGS IN THE U.S. EPA/600/SR-93/218.1994.
- SCHOOL FACILITIES: CONDITIONS OF AMERICA'S SCHOOLS. U.S. General Accounting Office. February, 1995.

# GAO SURVEY OF NATIONWIDE SCHOOLS

## 83% REPORTED UNSATISFACTORY ENVIRONMENTAL CONDITIONS

Figure 4: Building Repairs Reported Needed in America's Schools



# NEW ENGLAND SCHOOLS REPORTING

## UNSATISFACTORY FACTORS

STATE	VENTILATION	IAQ
CONNECTICUT	35.3%	18.5%
MAINE	28.7%	30.1%
MASS.	41.9%	30.9%
NEW HAMPSHIRE	46.8%	27.2%
RHODE ISLAND	28.9%	29.8%
VERMONT	32.2%	25.4%

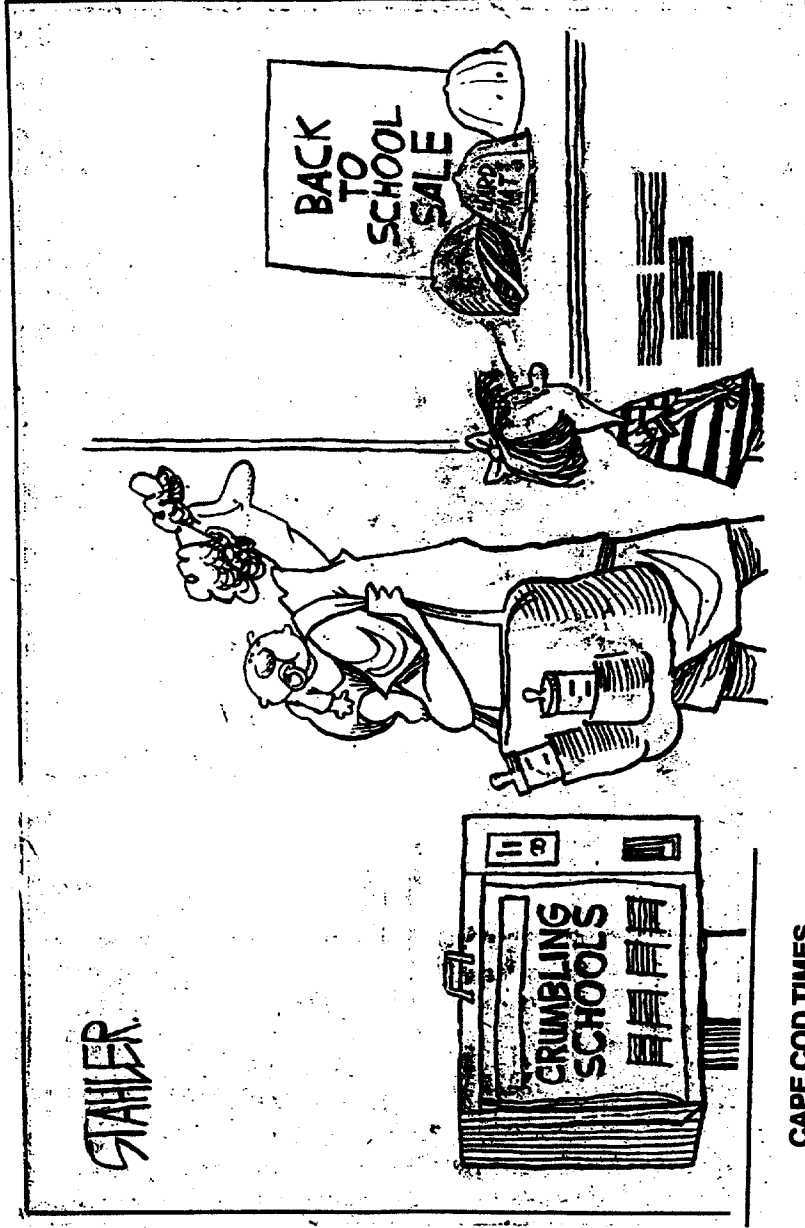
# UNIQUE ASPECTS OF SCHOOLS

- 4X OCCUPANCY RATE AS OFFICES
- TIGHT BUDGETS
- MULTIPLE POLLUTANT SOURCES
- VENTILATIONS SYSTEMS
- PORTABLE CLASSROOMS
- UNPLANNED USE OF SPACE

# CHARACTERISTICS OF SCHOOLS

- AGE
  - 31% BEFORE WWII
  - 43% DURING 50'S-60'S
- CONSTRUCTION
  - 70% SLAB ON GRADE
- TYPE OF VENTILATION
  - 80% CENTRAL HVAC OR UNIT VENTILATION
  - 40% SINGLE TYPE IN ALL CLASSROOMS

# INDOOR AIR QUALITY DURING SCHOOL RENOVATIONS



CAPE COD TIMES  
TUESDAY, AUGUST 20, 1996

NATIONWIDE  
2 NEW SCHOOLS A DAY  
1-3 MAJOR RENOVATIONS A DAY

# Connecticut Public Schools

## Totals By County

County	Public Schools	Student Enrollment	School Districts
Fairfield	215	118340	23
Hartford	244	130954	28
Litchfield	63	27497	21
Middlesex	51	20598	13
New Haven	247	119477	26
New London	93	37599	20
Tolland	47	20412	15
Windham	36	18138	15
Total	996	493015	161

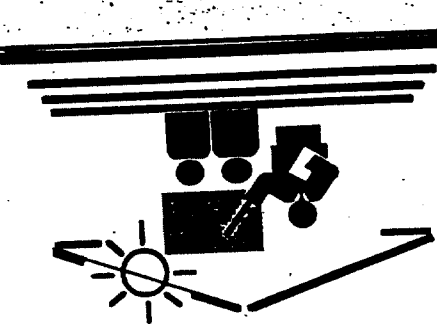
## **FACTORS AFFECTING IAQ**

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- **OPERATION AND MAINTENANCE**
- **OCCUPANTS AND ACTIVITIES**
- **BUILDING FABRIC**
- **CONTENTS**
- **SITING**

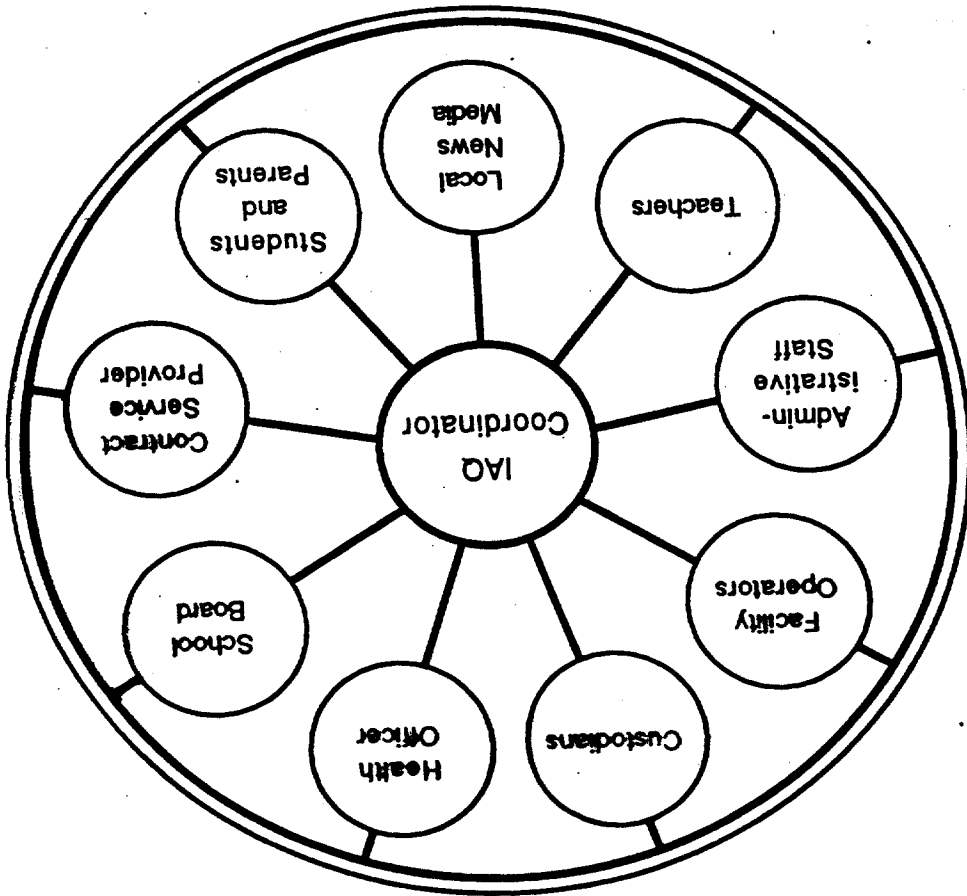
# IAQ Tools for Schools

Overview of  
Action Kit



## Who this Action Kit is For

- Primarily for the 110,000 existing K-12 schools
- (includes over 100,000 portables)
- All people whose activities and decisions affect school IAQ
- Two basic groups: Team Leader and Team Members

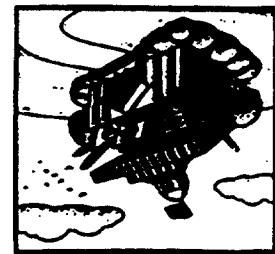


# IAQ COORDINATOR

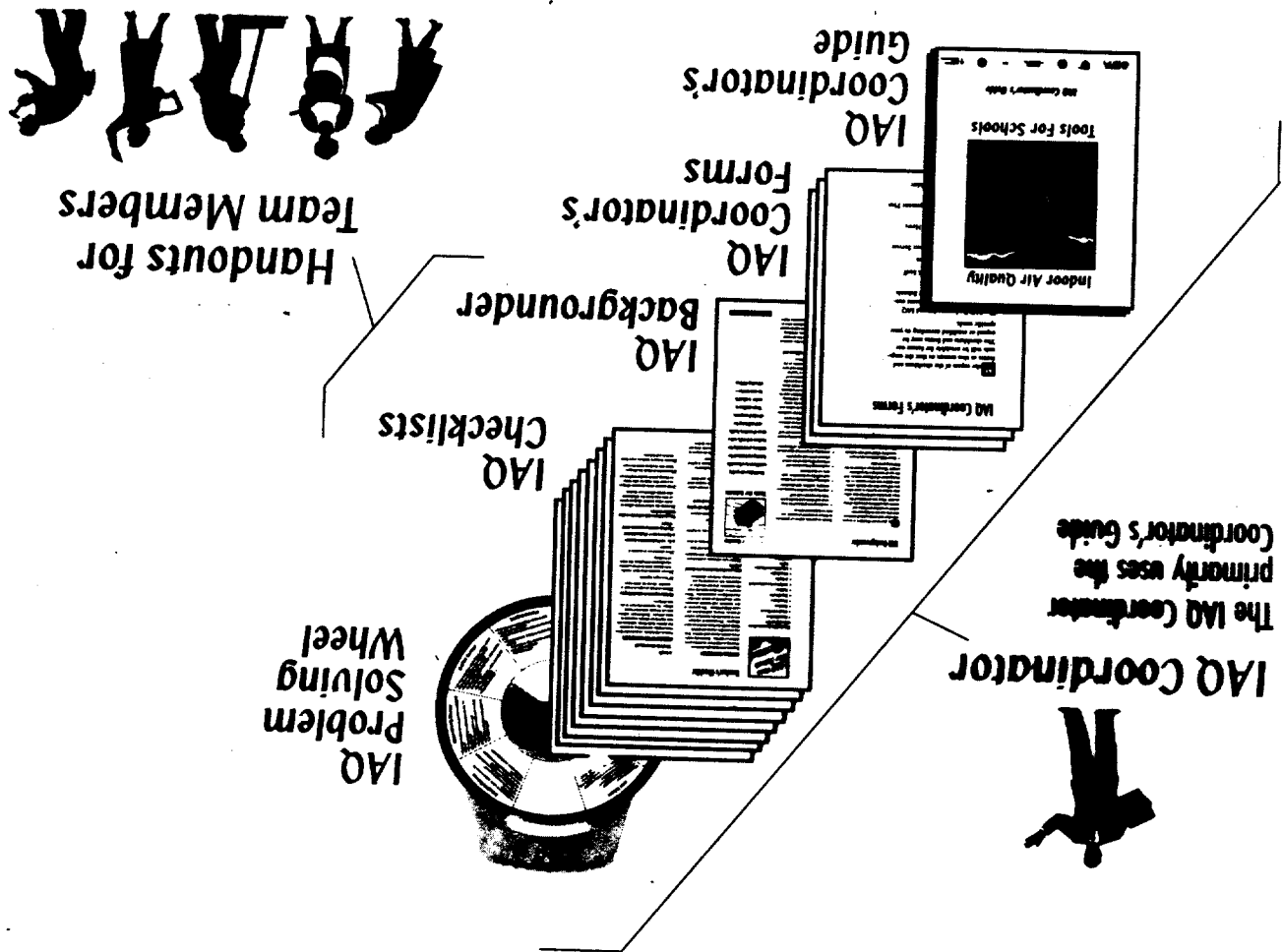
## MANAGEMENT ROLE

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- TEAM LEADER
- COMMUNICATES IAQ ISSUES
- RESPONDS TO COMPLAINTS
- DIRECTS ACTION



# How the Action Kit is Organized



# **MOST COMMON RENOVATION PROBLEMS**

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- **FINISHES**  
**CEMENT SEALANTS**  
**GYM FLOORS**
- **ROOFS**
- **DUST**  
**ASBESTOS**  
**LEAD**  
**COMMON CONSTRUCTION DUST**
- **VENTILATION SYSTEM**
- **CARPETS**

# TOP TEN REASONS

TO IMPLEMENT TOOLS FOR SCHOOLS

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- DECREASES HEALTH PROBLEMS
- PROMOTES LEARNING ENVIRONMENT
- ENHANCES STAFF PRODUCTIVITY
- FOSTERS GOOD RELATIONSHIPS
- DECREASES LIABILITY PROBLEMS

- **DOCUMENTS REPAIRS**
- **PRIORITIZES REPAIRS**
- **INSTITUTIONALIZES SOLUTIONS**
- **REDUCES EQUIPMENT DETERIORATION**
- **PROMOTES ENVIRONMENTAL CONCERNS**