

# Healthy and High Performing Schools Symposium April 18, 2014

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Executive Committee, Illinois Asthma Partnership

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# Who we are

- Representatives of the Illinois Asthma Partnership (IAP) – a state-wide coalition of 140 members that began in 2000
- Goal to reduce morbidity and mortality from asthma, reducing the costs of the disease and improving the quality of life for people with asthma
- IAP has Executive Committee, five workgroups, system for state-wide communication and supports activities of asthma coalitions in Illinois

# Who we are

- Stacy Ignoffo, MSW; Executive Director, Chicago Asthma Consortium
- Eileen Lowery, RN, MSN; Senior Director of Programs, Respiratory Health Association
- Jessica Gerdes, MS, RN, NCSN; Illinois State Board of Education
- Monica Paguia; Asthma Program Coordinator, US EPA
- Jack Barnette; Environmental Scientist, US EPA

# What we'll cover

- Impact of asthma on children
- Overview of asthma and asthma triggers
- Overview of state policies that relate to protecting children with asthma in the school setting
- EPA asthma program and resources
- A virtual walkthrough and environmental assessment

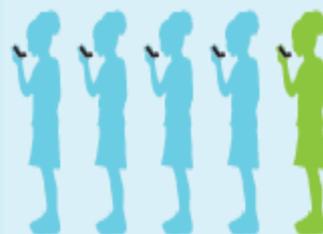
# ASTHMA'S IMPACT ON THE NATION

Asthma is **common**.

Asthma is **deadly**.



**1 in 11** children have asthma



**1 in 5** children with asthma went to an emergency department for asthma-related care in 2009.

**9** people **die** from asthma every day.

**1 in 12** adults have asthma

Black children are  
**2 TIMES**  
more likely to have asthma  
than white children.

Black Americans are **2-3** times more likely to die from asthma than any other racial or ethnic group.

## Asthma is disruptive.



NEARLY  
**1 in 2**

children with asthma report missing at least 1 day of school each year because of asthma.



**3 in 5**

People with asthma limit their physical activity.

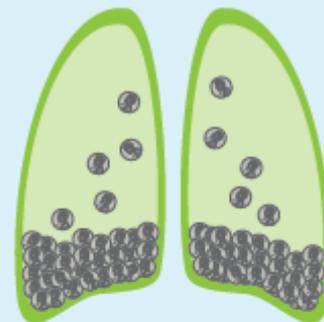


NEARLY  
**1 in 3**

adults with asthma report missing at least 1 day of work each year because of asthma.

## Asthma is expensive.

Asthma costs  
OUR NATION  
**\$56** BILLION  
per year



**1 in 4**

black adults can't afford their asthma medicines.



**1 in 5**

Hispanic adults can't afford their asthma medicines.

In 2009, there were:



**479,000**  
asthma-related  
hospitalizations



**1.9 million**  
asthma-related  
emergency  
department visits



**8.9 million**  
asthma-related  
doctor visits

# Asthma

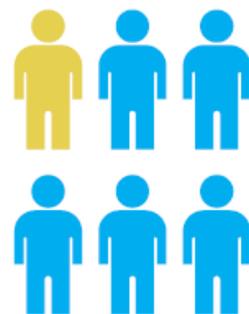
## IN ILLINOIS

Approximately **850,000** people in Illinois currently have asthma.

**183** people died from asthma in 2010. That's **1 person every 2 days**.



**4** **8.7%** of adults in Illinois currently have asthma.



**5** **13.6%** of children in Illinois currently have asthma.

**10** **54.7%** (1 in 2) children with asthma missed at least **1 DAY OF SCHOOL** in the past 12 months due to their asthma.



**76.5%** of children do not have their asthma under control



**\$383**

million spent in 2011 on hospitalizations

# Asthma in Schools

- Children with uncontrolled asthma may miss more school and have poorer academic performance than children without asthma
- Asthma is one of the leading causes of absenteeism
- Children spend a lot of time at school
- Environmental asthma triggers can be found in schools
- It is crucial that schools have strong asthma management programs for students with asthma



# Asthma in Schools

- Asthma-friendly schools create safe learning environments for children with asthma
- They (in part):
  - Identify students with asthma
  - Have emergency asthma protocols in place
  - Ensure students have access to their medications
  - Have asthma education for parents, children and school staff
  - Maintain healthy environment – establish policies and maintain good indoor air quality



# Asthma

## *Overview and Triggers*

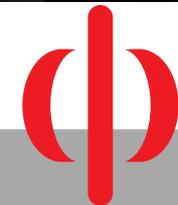
Eileen Lowery, RN, MSN

Senior Director, Programs, Respiratory Health Association  
Executive Committee, Illinois Asthma Partnership



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HEALTH  
ASSOCIATION®

# About Us



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HEALTH  
ASSOCIATION®

# Objectives

- Describe an overview of asthma
- Review signs of asthma episode
- Discuss causes and triggers
- Explain the relevance of asthma triggers in managing asthma



# What is Asthma?

- *Chronic* lung disease
- Inflames and narrows the airways
- Active vs. passive asthma

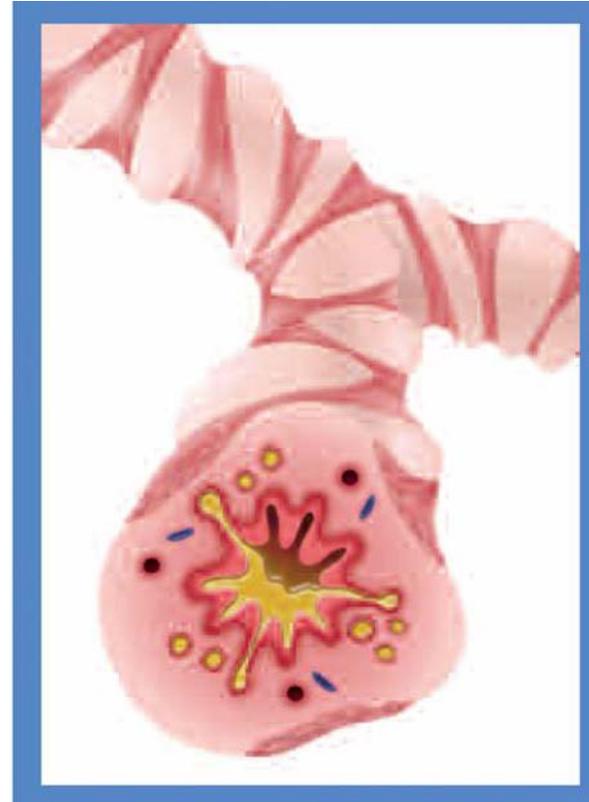


# Airway Changes with Asthma

**Normal airway**



**Uncontrolled Asthma**



# Asthma Overview

## Causes & triggers of asthma episode

- Irritants aggravate the airways
- Allergens cause sensitive airways to react
- Allergies and asthma



# Asthma Warning Signs: Level I

## Warning signs early in an episode:

- shortness of breath
- cough
- feeling tired or weak
- itchy chin or throat
- watery eyes
- dark circles under eyes
- stomach ache

## How to respond:

- move child away from their triggers
- administer quick-relief medication
- monitor child – never leave them alone



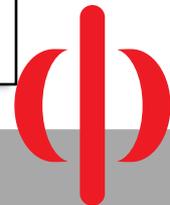
# Asthma Warning Signs: Level II

## More serious signs and symptoms are:

- medications are not working or do not last
- increase in coughing or tightness in chest
- wheezing
- inability to do usual activities

## How to respond:

- If symptoms are not better within 15 minutes of using medication, call 911, follow asthma action plan and call parent.
- If symptoms worsen, call 911, follow asthma action plan and call parent.
- Continue monitoring child



# Asthma Warning Signs: Level III

Severe signs and symptoms are:

- severe shortness of breath
- difficulty walking or talking (inability to finish a sentence)
- retractions (sucking in skin at ribs and neck)
- paling, blue or gray lips and nail beds

## How to respond:

- Call 911 and parent for **any one** of the above symptoms.
- If you haven't already, administer quick-relief medication.



# Asthma Causes & Triggers

- Irritants

- Smoke exposure
- Air pollution
- Strong odors
- Hot/cold weather



# Asthma Causes and Triggers

- Allergens
  - Animals with fur or feathers
  - Mold
  - Trees, grasses and pollens
  - Dust and dust mites
  - Roaches and rodents



# Asthma Causes & Triggers

- Colds and Flu
- Changes in breathing pattern (response to emotions)
- Exercise



# Asthma Programs

## Fight Asthma Now<sup>®</sup>

- Target youth/teens, 4-40 min session

## Asthma Management

- Targets caregivers, 1-hour session

## Asthma Friendly Childcare

- Targets childcare center



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# Contact Us

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## Asthma

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# Asthma Policy and Schools

Jessica Gerdes, MS, RN, NCSN

Principal Consultant, School Nursing and Health Issues  
Illinois State Board of Education



**Illinois  
State Board  
of Education**

# Illinois State Board of Education

## *Mission*

The Illinois State Board of Education will provide leadership, assistance, resources and advocacy so that every student is prepared to succeed in careers and postsecondary education, and share accountability for doing so with districts and schools.

## *Goals*

**GOAL 1:** Every student will demonstrate academic achievement and be prepared for success after high school.

**GOAL 2:** Every student will be supported by highly prepared and effective teachers and school leaders.

**GOAL 3:** Every school will offer a safe and healthy learning environment for all students.



**Illinois  
State Board  
of Education**

**GOAL 3:** Every school will offer a safe and healthy learning environment for all students.

- Laws and policies on medications
- Promote Green Cleaning
- Integrated Pest Management
- Individual health plans, emergency action plans, “504” plans



# Emergency Medications

- Public Act 096-1460  
Self administration of emergency medications:
  - Asthma inhaler
  - Epinephrine auto injector
  - Self-carry
  - Self-administer
- Public Act 097-0361  
Self administration of epinephrine medications:
  - Auto –injector use by student on self
  - Auto-injector use by staff on designated student
  - Auto-injector use by RN on undesignated student



# Green Cleaning

- Green Cleaning Schools Act
  - Passed August 2007
  - Only second state in the country to require use of environmentally sensitive cleaning products in all elementary and secondary schools
  - Resource:
    - <http://healthyschoolscampaign.org/policy/environment/>



# Integrated Pest Management

- The Structural Pest Control Act requires public schools and licensed day care centers to, when economically feasible, develop and implement an IPM program.
- School districts and day care centers must maintain a registry of parents/guardians of students and of employees who have registered to receive written notification prior to application of pesticides to school property or provide written notification to all parents and guardians of students before such pesticide application.
- Resource:
  - [http://www.isbe.net/construction/health\\_safety/default.htm](http://www.isbe.net/construction/health_safety/default.htm)
  - <http://www.idph.state.il.us/envhealth/ipm/index.htm>



# Anti-School Bus Idling



- Diesel exhaust from idling school buses can affect the air quality in and around school buildings as well as throughout local communities.
- Voluntary Illinois EPA Program



# Individualized Health Plans

- Individualized Health Care Plans
- Emergency Action Plans
- Section 504 Plans
  
- Inherent in all of the above:
  - School RN
  - School MD
  - Parents
  - Student
  - Teaching staff
  - Custodial staff



# EPA Resources for Asthma Friendly Schools

Monica Paguia

Jack Barnette

U.S. EPA



# Outline

- EPA's role with asthma management
- EPA Asthma Resources for Schools
- Indoor Air Quality Tools For Schools Action Kit
- Virtual School Walkthrough



# EPA's Coordinated Approach on Asthma

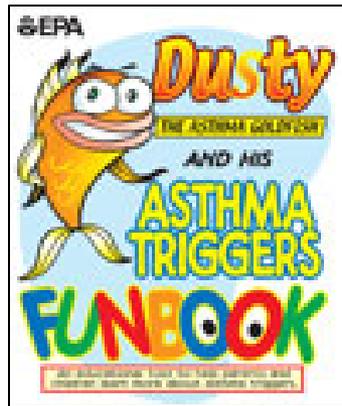
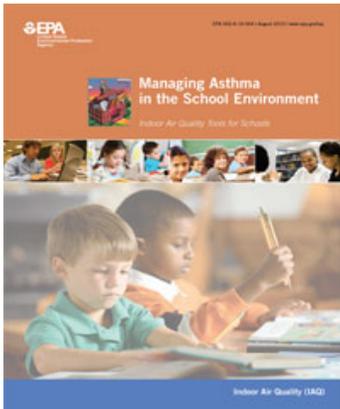
- EPA promotes scientific understanding of environmental asthma management.
- With federal, state and local partners, we are building the nation's capacity to control asthma.
- Our purpose is to build knowledge and awareness to improve the quality of life for millions of Americans with asthma.



# Asthma Resources for Schools

## Free Asthma Publications

[www.epa.gov/asthma/publications.html](http://www.epa.gov/asthma/publications.html)



- **FREE Webinar on Asthma Disparities in Schools**  
Thursday, May 1, 2014  
1-2:30 pm CDT
- Register at [www.AsthmaCommunityNetwork.org](http://www.AsthmaCommunityNetwork.org)

## Student Curriculum

### Breathing Easy: Keeping the Inside of our Homes Healthy and Clean

- Geared toward children ages 9 -13
- Includes lesson plans, handouts for kids, and visual aids

<http://yosemite.epa.gov/ochnp/ochnpweb.nsf/content/lesson3.htm>



# Other EPA Programs

- Clean School Bus USA  
<http://epa.gov/cleanschoolbus/csb-overview.htm>
- Integrated Pest Management (IPM)  
in Schools  
<http://www.epa.gov/pesticides/ipm/>
- Air Quality Index (AQI)  
School Flag Program  
<http://www.airnow.gov/schoolflag>
- Schools Chemical Cleanout  
Campaign  
<http://www.epa.gov/schools/chemicals.html>



# The *Indoor Air Quality (IAQ)* *Tools for Schools (TfS)*

## Action Kit



[www.epa.gov/iaq/schools](http://www.epa.gov/iaq/schools)





# Walkthrough Inspection Checklist

Name: \_\_\_\_\_  
 School: \_\_\_\_\_  
 Room or Area: \_\_\_\_\_ Date Completed: \_\_\_\_\_  
 Signature: \_\_\_\_\_

### Instructions

1. Read the IAQ Background and the Background Information for this checklist.
2. Keep the Background Information and make a copy of the checklist for future reference.
3. Complete the Checklist.
  - Check the "yes," "no," or "not applicable" box beside each item. (A "no" response requires further attention.)
  - Make comments in the "Notes" section as necessary.
4. Return the checklist portion of this document to the IAQ Coordinator.

## 1. GROUND LEVEL

Yes No N/A

- 1a. Ensured that ventilation units operate properly.....
- 1b. Ensured there are no obstructions blocking air intakes.....
- 1c. Checked for nests and droppings near outdoor air intakes.....
- 1d. Determined that dumpsters are located away from doors, windows, and outdoor air intakes.....
- 1e. Checked potential sources of air contaminants near the building (chimneys, stacks, industrial plants, exhaust from nearby buildings).....
- 1f. Ensured that vehicles avoid idling near outdoor air intakes.....
- 1g. Minimized pesticide application.....
- 1h. Ensured that there is proper drainage away from the building (including roof downspouts).....
- 1i. Ensured that sprinklers spray away from the building and outdoor air intakes.....
- 1j. Ensured that walk-off mats are used at exterior entrances and that they are cleaned regularly.....

## 2. ROOF

*While on the roof, consider inspecting the HVAC units (use the Ventilation Checklist).*

- 2a. Ensured that the roof is in good condition.....
- 2b. Checked for evidence of water ponding.....
- 2c. Checked that ventilation units operate properly (air flows in).....
- 2d. Ensured that exhaust fans operate properly (air flows out).....
- 2e. Ensured that air intakes remain open, even at minimum setting.....
- 2f. Checked for nests and droppings near outdoor air intakes.....
- 2g. Ensured that air from plumbing stacks and exhaust outlets flows away from outdoor air intakes.....

## 3. ATTIC

- 3a. Checked for evidence of roof and plumbing leaks.....
- 3b. Checked for birds and animal nests.....

## 4. GENERAL CONSIDERATIONS

- 4a. Ensured that temperature and humidity are maintained within acceptable ranges.....
- 4b. Ensured that no obstructions exist in supply and exhaust vents.....
- 4c. Checked for odors.....
- 4d. Checked for signs of mold and mildew growth.....

## 4. GENERAL CONSIDERATIONS (continued)

Yes No N/A

- 4e. Checked for signs of water damage.....
- 4f. Checked for evidence of pests and obvious food sources.....
- 4g. Noted and reviewed all concerns from school occupants.....

## 5. BATHROOMS AND GENERAL PLUMBING

- 5a. Ensured that bathrooms and restrooms have operating exhaust fans.....
- 5b. Ensured proper drain trap maintenance:
  - Water is poured down floor drains once per week (approx. 1 quart of water).....
  - Water is poured into sinks at least once per week (about 2 cups of water).....
  - Toilets are flushed at least once per week.....

## 6. MAINTENANCE SUPPLIES

- 6a. Ensured that chemicals are used only with adequate ventilation and when building is unoccupied.....
- 6b. Ensured that vents in chemical and trash storage areas are operating properly.....
- 6c. Ensured that portable fuel containers are properly closed.....
- 6d. Ensured that power equipment, like snowblowers and lawn mowers, have been serviced and maintained according to manufacturers' guidelines.....

## 7. COMBUSTION APPLIANCES

- 7a. Checked for combustion gas and fuel odors.....
- 7b. Ensured that combustion appliances have flues or exhaust hoods.....
- 7c. Checked for leaks, disconnections, and deterioration.....
- 7d. Ensured there is no soot on inside or outside of flue components.....

## 8. OTHER

- 8a. Checked for peeling and flaking paint (if the building was built before 1980, this could be a lead hazard).....
- 8b. Determined date of last radon test.....

## NOTES



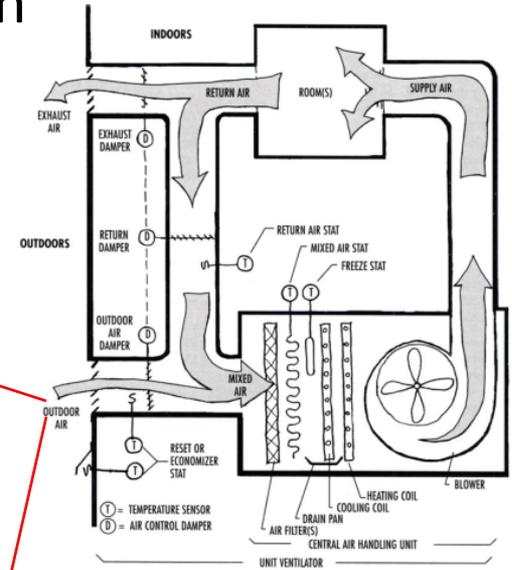


# Virtual Walkthrough





Learn about how your ventilation system works.



Outside air gets pulled in here.



# Bus Stop









# Moldy Ceiling

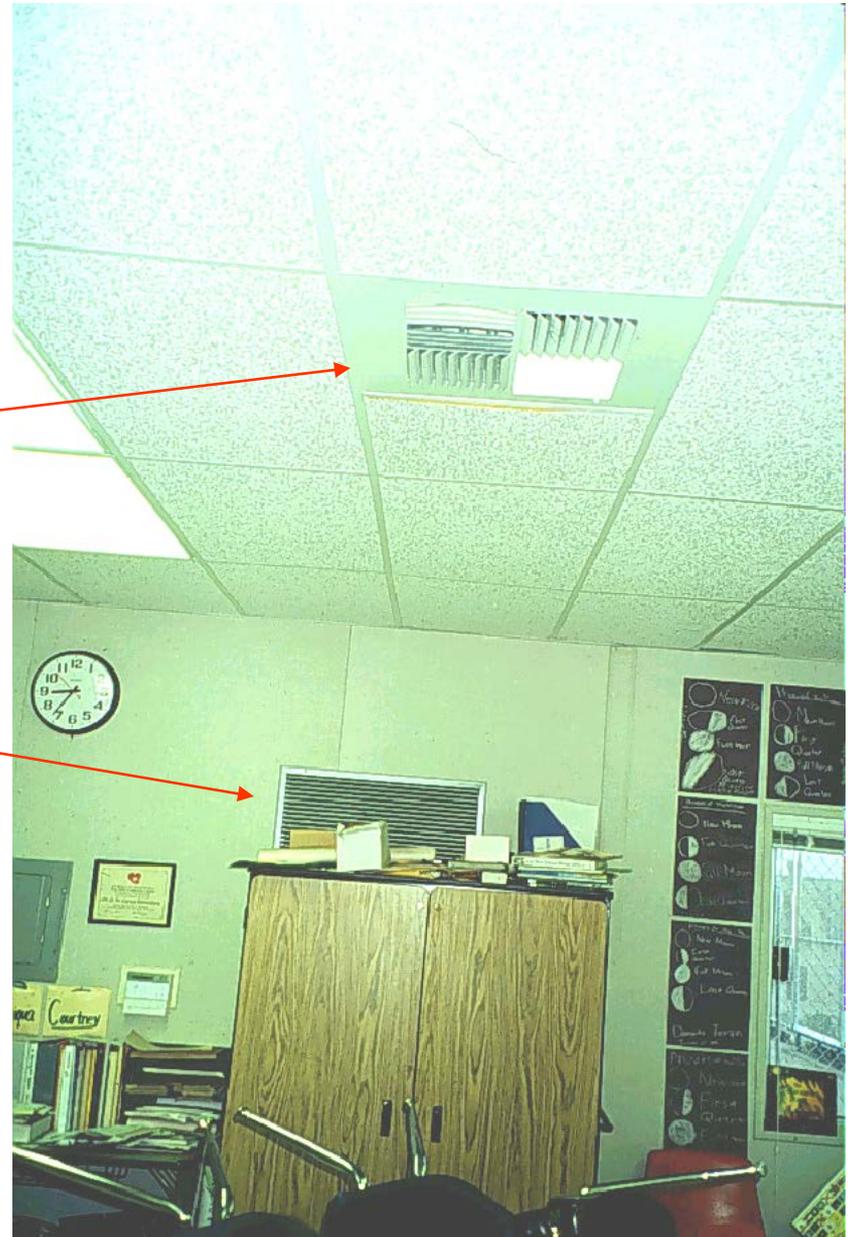


# Air Handler, Air Defused, and Moldy Air Duct



*For air to come out of here.*

*It has to get in there.*







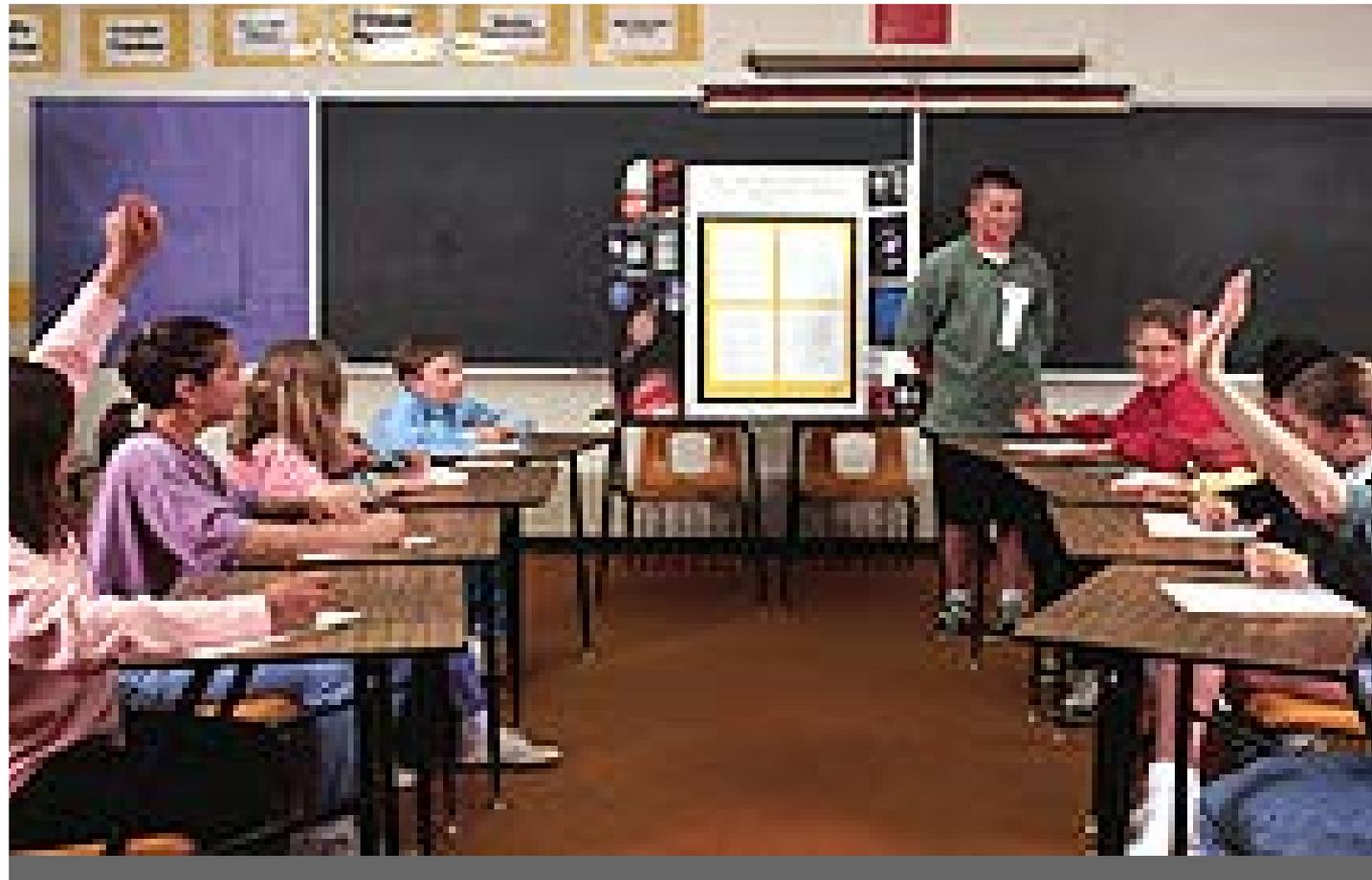
I will say your name  
I will say your name

**Be serious in the Lord...**  
"With God all things are possible."  
The righteous are as bold as a lion.  
Draw to the Lord with all thy heart,  
Thy soul, thy mind, thy strength, thy money,  
Thyself, and all that thou hast.  
If thou do for me,  
I will give thee a reward.  
The Lord is the strength of my life,  
Of whom shall I be afraid?  
God is light, and in Him  
is no darkness at all.





# Thank You!



# Questions?

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