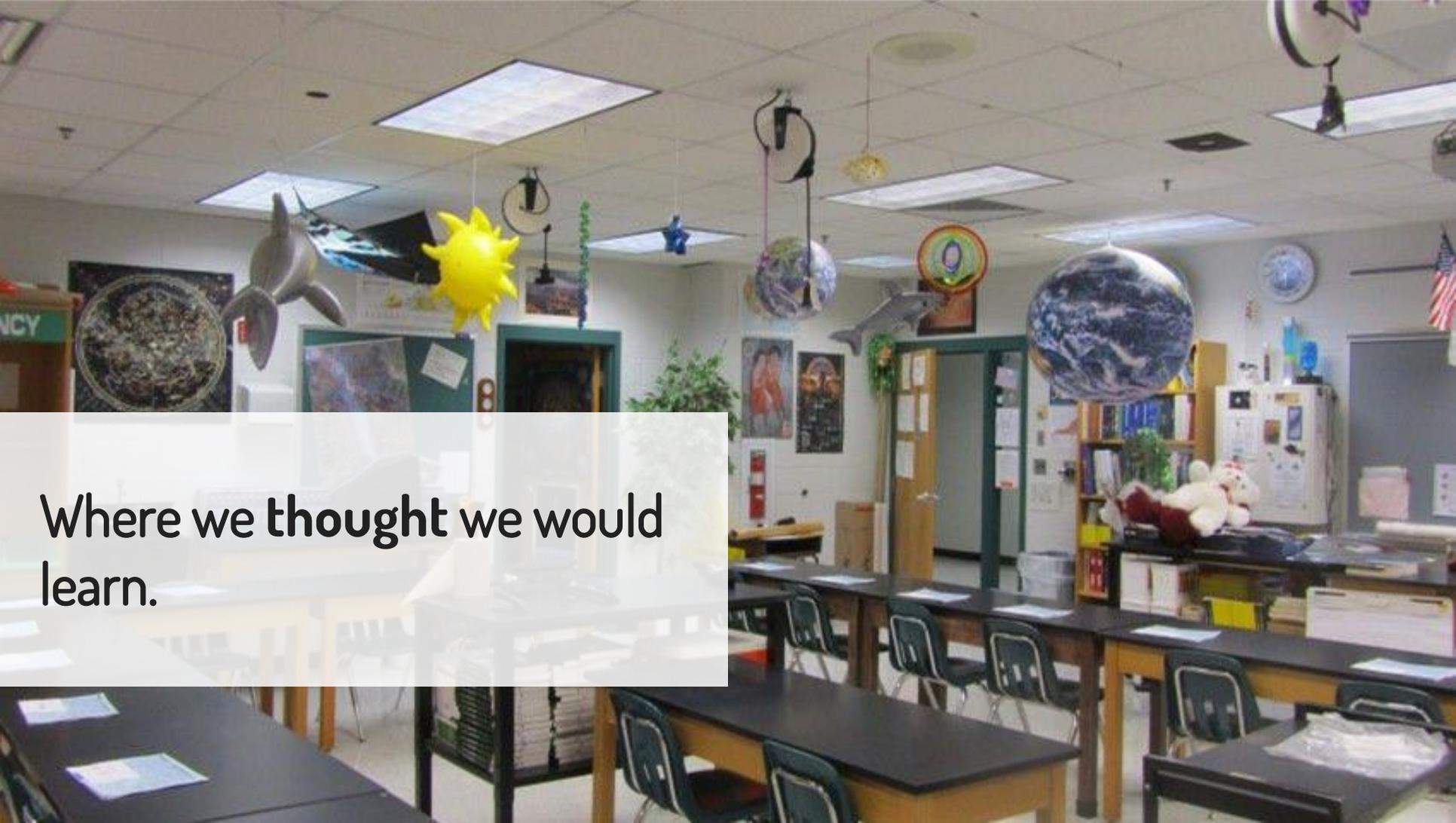




STANDING 
FOR 
TOMORROW
FOR ENVIRONMENTAL HEALTH

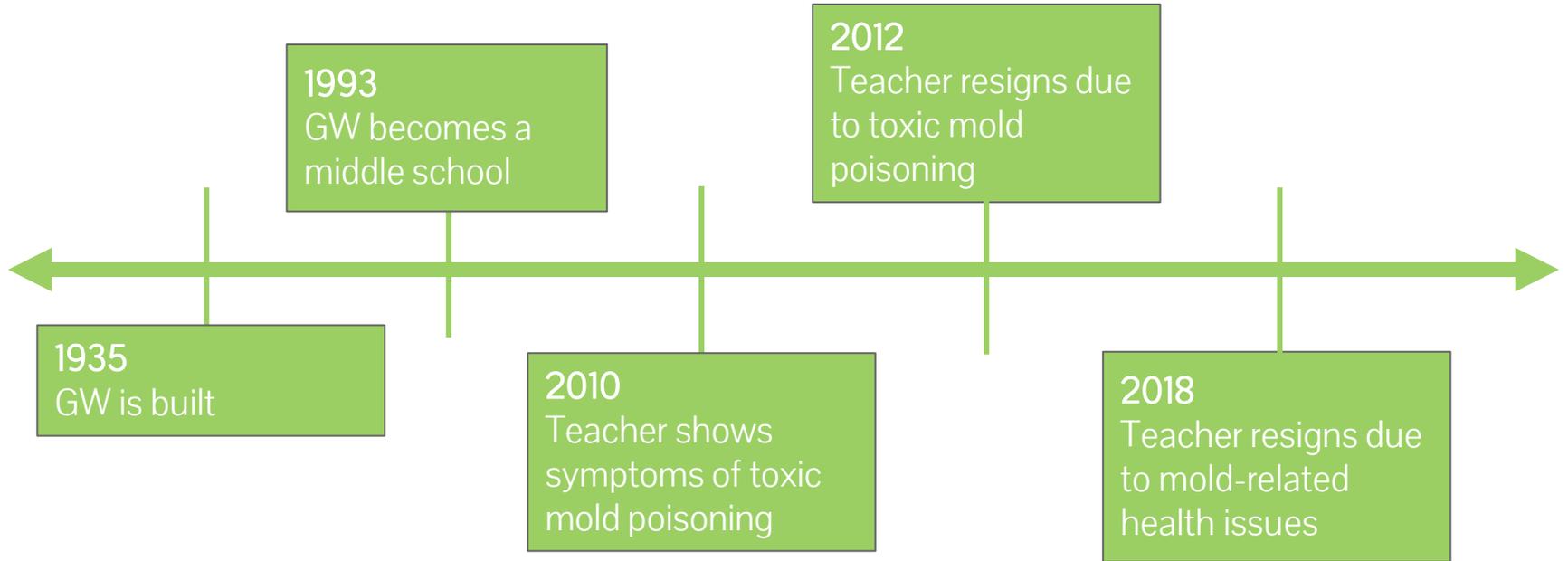


Where we thought we would learn.

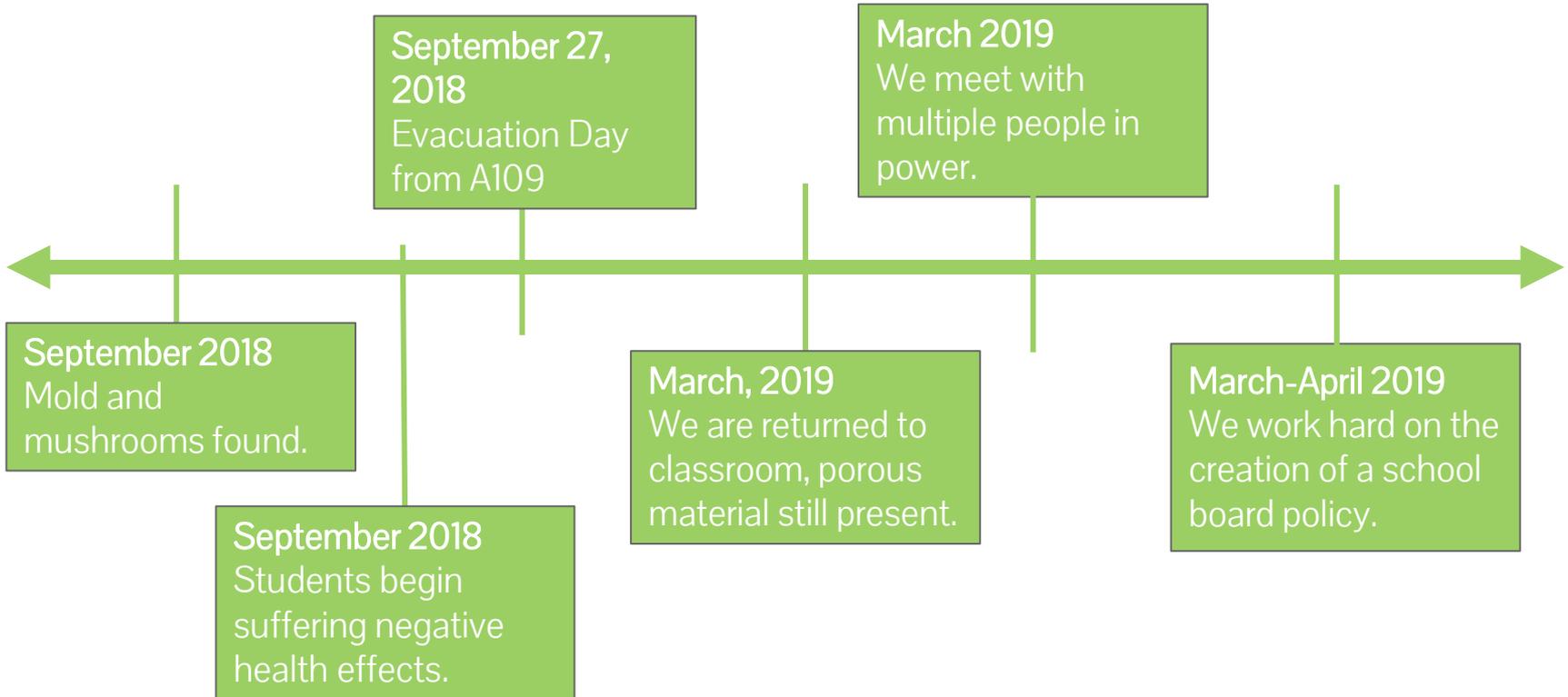


Where we **actually** learn.

An **issue** for **decades**?



Our **Journey** this School Year



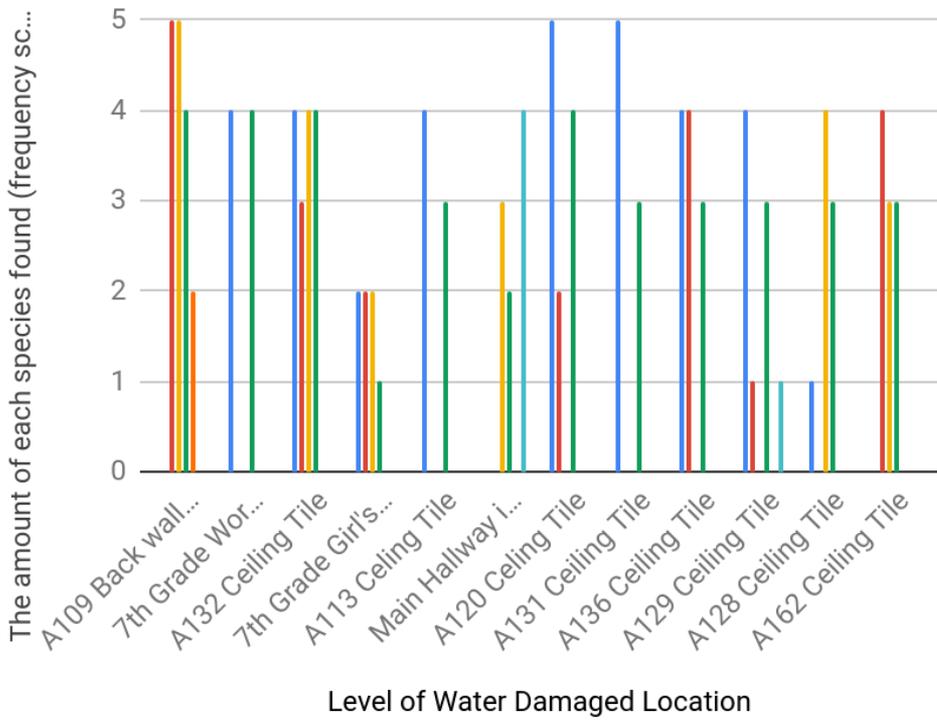
Giving a **voice** to the
affected:

A central rectangular area featuring a microscopic image of mold with a dark blue horizontal band across the middle. The band contains white text and a play button icon. The mold image is slightly blurred and has a light beige background.

**MOLD WAS TESTED POSITIVE
IN 15/26 CLASSROOMS**

GWMS, City, & Regional Science Fair Winners:

The Effect of Water Damage on Mold Growth



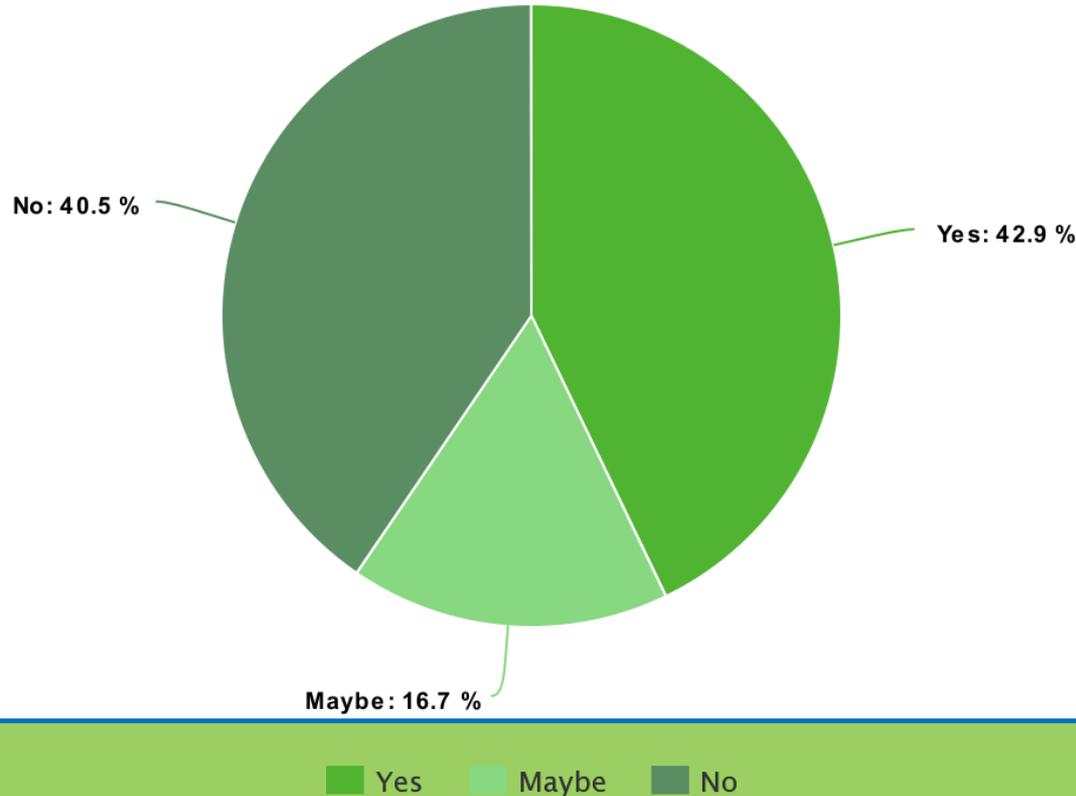
- Most Toxic: Stachybotrys
- 2nd Most Toxic: PEN/ASP
- 3rd Most Toxic: Cladosporium

Mold Inspection Network Lab Rating Scale (Concentration of Spores)					
0	1	2	3	4	5
No Species Found	Scattered	Very Low	Low	Medium	High

- **Nearly 60% of 7th grade classroom tested positive for multiple types of mold**
- **Mold is located in every part of the building**

GW Science Fair Human Health Survey Data

Have you ever had a runny nose or nasal pressure that goes away an hour after you get home?



The effects of mold on **learning**.

Mold Health Effect

Impact on Learning

[Sinus Conditions](#) (National Institute of Health, 2013)

[Day time fatigue and sleepiness.](#)

[Asthma complications](#), chest tightness, shortness of breath, and wheezing or coughing. (American Lung Association, 2018)

[Lack of oxygen to brain for proper function.](#)

[Day-time Fatigue and Sleepiness](#) (National Institute of Health, 2012)

[Not being focused](#), distractions, test scores dropping.

[Chronic Lung Disease](#) (Centers for Disease Control and protection, 2017)

[A leading cause of death](#), absenteeism, hospitalization.

[Liver Cancer](#) (Environmental Health Perspectives, 2005)

[Liver transplants](#), absenteeism, hospitalization, death..

[Autoimmune Diseases including Lupus](#) (National Institute of Health, 2009)

[Absenteeism](#), hospitalization, other health complications.

Click on underlined text for cited websites.

Pulmonary Aspergillosis

- Mold spores can grow within lung tissue (abnormal spaces)
- Growths can form and enter the bloodstream



How immunodeficiency is affected by mold.

Immunocompromised individuals are at risk for infections when exposed to mold and [humid indoor conditions](#). Hypersensitivity pneumonitis is a blanket term for inflammation in the lungs— and it is triggered by, among other things, mold spores. If left untreated, it could cause [pulmonary fibrosis](#)- which could result in death.

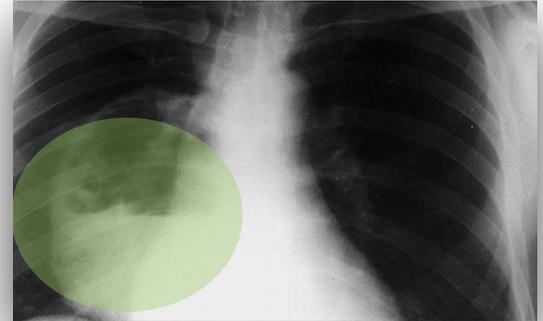
ACCORDING TO THE [CDC](#),

“Immunocompromised people and people with chronic lung illnesses, such as obstructive lung disease, may get serious infections in their lungs when they are exposed to mold.”

“In 2004 the Institute of Medicine (IOM) found there was sufficient evidence to link indoor exposure to mold with upper respiratory tract symptoms, cough, and wheeze in otherwise healthy people; with asthma symptoms in people with asthma; and with hypersensitivity pneumonitis in individuals susceptible to that immune-mediated condition.”

Highlighted: a **pulmonary abscess**., one of the things that mold can **potentially cause**.

A pulmonary abscess is a pus-filled cavity in the lungs.



According to the [CDC](#),

“Other recent studies have suggested a potential link of early mold exposure to development of asthma in some children, particularly among children who may be genetically susceptible to asthma development, and that selected interventions that improve housing conditions can reduce morbidity from asthma and respiratory allergies, but more research is needed in this regard.”

Both photos via the Washington Post.



Mold found on a sandal.



Olivia with her mother and father

The case of Olivia Paregol.

The combination of:

A **weakened immune system** caused by **Crohn's disease**, mold spores **attacking** her respiratory system, and a **common adenovirus**, resulted in the death of a blossoming Maryland college student.

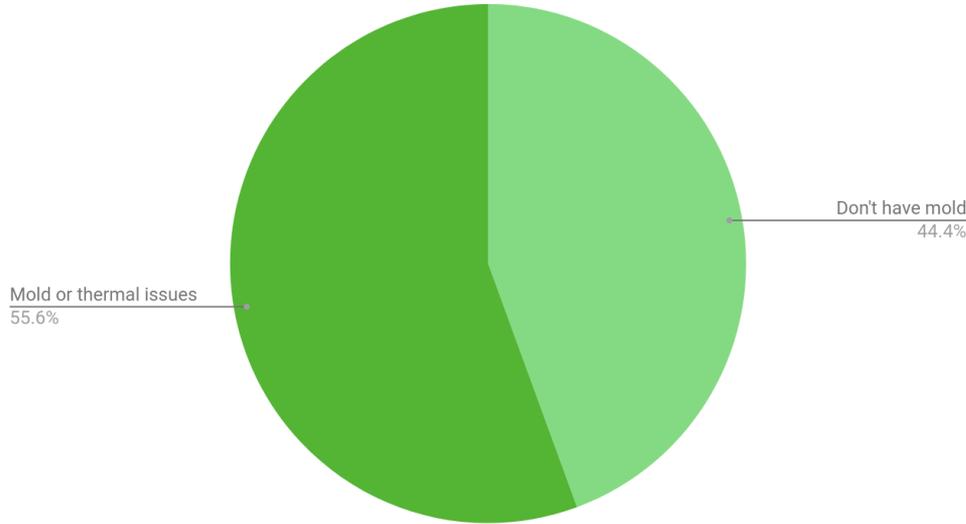
What prevents the same thing from happening in **our schools** in the future?



You have a **sick building** with **600 children**.

- A PARENT TO UNIVERSITY OFFICIALS





Is GW Alone?

- **55.6% of ACPS schools** have mold or thermal issues (Data compiled from ACPS school websites)
- Lack of air conditioning or inadequate air conditioning systems leads to **optimal mold growth** conditions

‘Borderline criminal’: Many public schools teeter on the edge of decrepitude

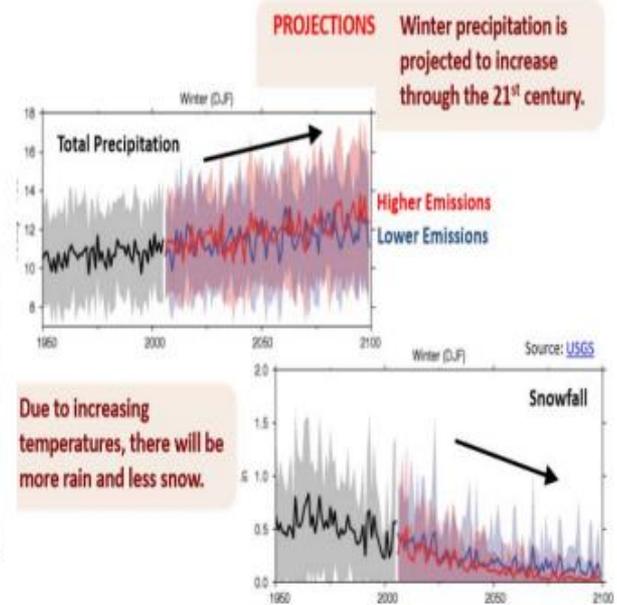
Climate Change

Climate Change Affects Virginia: Precipitation & Snowfall

- Less snowfall more inland flooding
- Increase rainfall winter
- Decrease rainfall in summer
- Snowfall moves toward the spring season
- Looking into future more intense rainfall ,droughts, storms and flooding



Changes in precipitation and temperature regimes have the potential to disrupt agriculture and forestry.



www.agriculture.vsu.edu

The **EPA**, **CDC** and **VSU** all agree that precipitation will be affected by climate change in the state of Virginia

The **hidden** cost of mold in schools.



-
- Loss of teachers and administrators
 - Student absenteeism
 - Effects of mold growth on brain function
 - Teachers are out sick, cost of subs
 - Lower test scores
 - Potential lawsuits from mold symptoms as more government studies continue to be released

Pioneer Researcher for VA Mold Legislation



“School buildings should not be places that threaten our health! I applaud the students of George Washington Middle School for **taking initiative** and **responsibility** for improving their learning environment and for the careful, scientific, and thorough approach to researching and working to solve the mold problem in their school.”

*Dr. Kathleen Parrott, Ph.D. Virginia Tech University
Professor of Residential Environments and Design*

The process of policy begins....



September 16, 2003

2003-R-0624

MOLD REMEDIATION LEGISLATION AND LITIGATION

By: Paul Frisman, Associate Analyst

remediation laws and litigation. Specifically, you asked (1) if Connecticut or other states have laws on mold that are not properly handled mold cases.

In 2003, the act requires, that starting January 1, 2008, local school boards periodically evaluate mold exposure to microbiological airborne particles, including mold. The act makes schools responsible for maintaining their facilities and contracting the appropriate mold remediation facility as soon as a fungus is discovered for

figures (NCSL) reports that six other states (California, Montana, New Jersey, Oklahoma, Tennessee and Texas) passed legislation in 2003 that addresses the issue of mold and other potential health hazards affecting indoor air quality in any educational facility operated by Alexandria City Public Schools (ACPS). The policy should be an addition to FA-R. Among other matters, the act should require that, beginning as soon as it is passed, a school board approved contractor will biannually evaluate any and all school buildings for potential exposure to microbiological airborne particles, including mold. The act will make ACPS responsible for maintaining their facilities and contracting the appropriate mold remediation facility as soon as a fungus is discovered for

Standing For Tomorrow

AIR POLLUTION; SCHOOLS (GENERAL);
POLLUTION - AIR;

PROPOSED MOLD LEGISLATION

[The following policy has been adapted from the Connecticut General Assembly](#)

By Standing for Tomorrow & Students for School Health
(Students at George Washington Middle School)

SUMMARY

- Students propose a legislation in 2020 that addresses the issue of mold and other potential health hazards affecting indoor air quality in any educational facility operated by Alexandria City Public Schools (ACPS). The policy should be an addition to FA-R. Among other matters, the act should require that, beginning as soon as it is passed, a school board approved contractor will biannually evaluate any and all school buildings for potential exposure to microbiological airborne particles, including mold. The act will make ACPS responsible for maintaining their facilities and contracting the [appropriate mold remediation facility](#) as soon as a fungus is discovered for



Gathering **support.**



Meeting with GWMS Principal, Jesse Mazur, GW Campus Manager, and GW Building Maintenance Engineer who support our advocacy



Meeting with Student School Board Reps Ewan Thompson and Bridget Williams



Meeting with Mr. Mann and Ms. Jackson, who told us to contact the school board



Meeting with Senator Adam Ebbin who signed our petition and heavily endorsed our advocacy in passing policy



**ACPS POLICY DIRECTOR
JENNIFER ABBRUZZESE**

- Easier to add mold regulation into the **existing policy** ([FA-R](#))
- We need to study the relationship between **set point policies** and **mold growth**.



**ALEXANDRIA CITY
COUNCILMEMBER CANEK AGUIRRE**

- Council Member Aguirre **supports the need** for prioritizing statewide mold legislation
- **Advice**: We **MUST raise awareness** and gain **public support** to get into the 2020 Legislative packet.



**ALEXANDRIA CITY LEGISLATIVE
DIRECTOR SARAH TAYLOR**

- Timeline to get into the **Legislative Packet** (Aug-Sept)
- Base your legislation on one that has recently passed: **Senator McPike's Lead Water Testing Bill (SB 1359)**

Gathering support.



Presenting at George Washington Middle School Staff Meeting



Presenting at GWMS Parent Teacher Association (PTA) Meeting



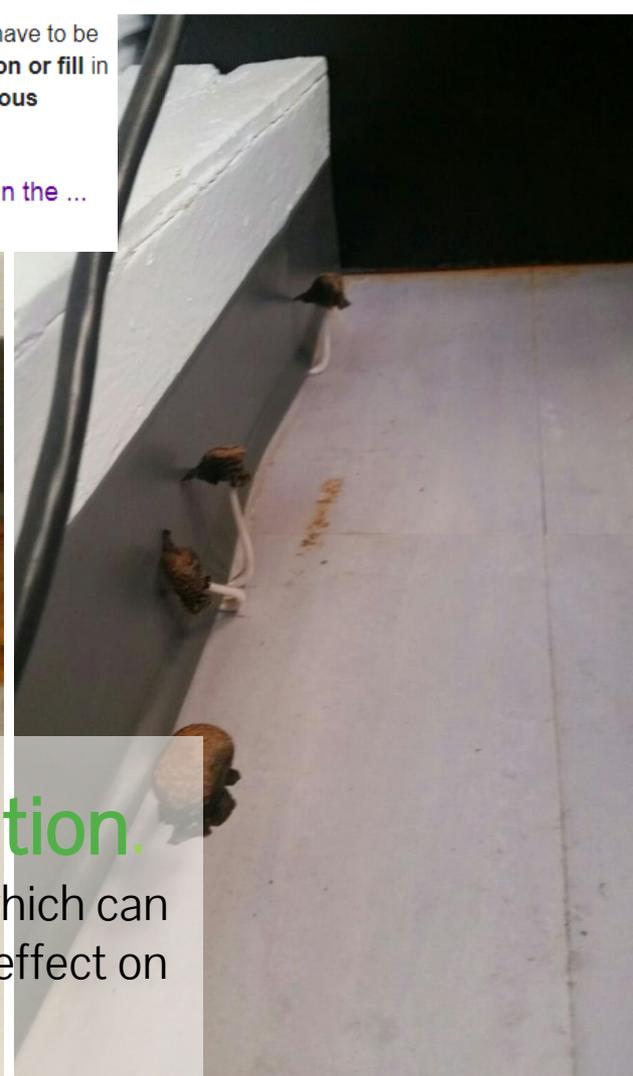
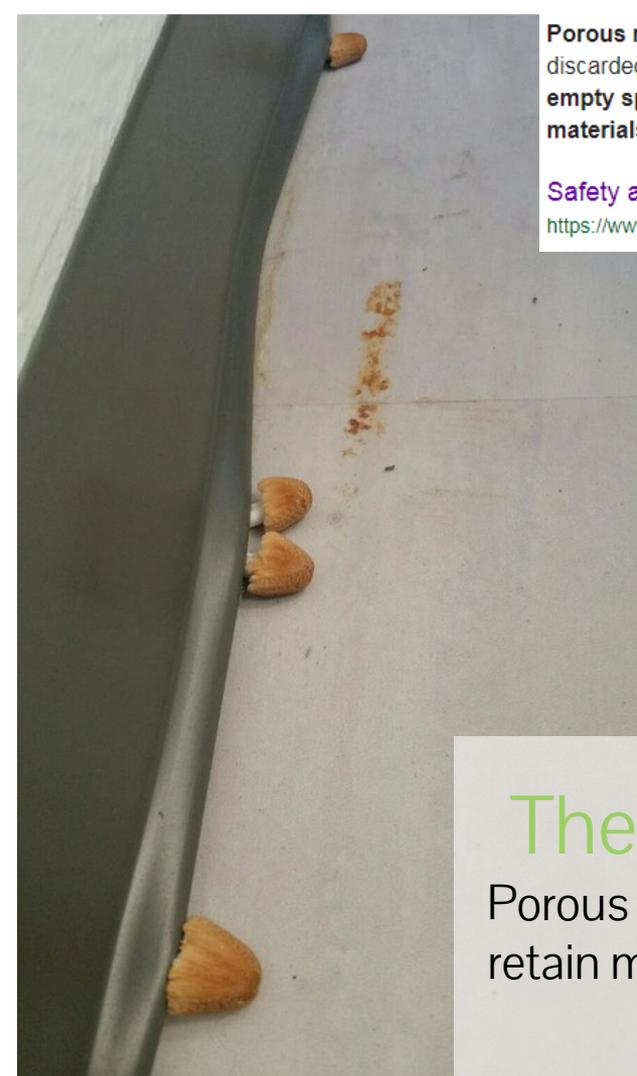
Senator Barker signed our petition and encouraged us to reach out to the city council

Porous materials that are wet and have **mold growing** on them may have to be discarded because **molds can infiltrate porous substances and grow on or fill in empty spaces or crevices**. ... They should not be used to vacuum **porous materials**, such as gypsum board. Mar 10, 2010

Safety and Health Information Bulletins | A Brief Guide to Mold in the ...
<https://www.osha.gov/dts/shib/shib101003.html>

The science of remediation.

Porous material is material with pores which can retain moisture and can have a sponge effect on mold spores. It is a mold haven.





How this all **connects**....

Virginia Department of Education - Life Science Standards:

- **LS.7** The student will investigate and understand that interactions exist among members of a population

Mold and humans.

- **LS.10** The student will investigate and understand that ecosystems, communities, populations, and organisms ... respond to daily, seasonal, and long-term changes in their environment

Climate change affects mold growth.



Learning through **mold.**

STANDARDS

The student will plan and conduct **investigations.**

Patterns of cellular organization and their relationship to **life processes.**

How can organisms be **classified?**

Organisms within an ecosystem are **dependent** on one another and on non living components of the environment.

Interactions exist among members of a population.

Organisms adapt to biotic and abiotic factors in an ecosystem.

Organisms (ecosystems/population) **change over time.**

Relationships between ecosystem dynamics and **human activity.**

HOW WE LEARNED IT

Mold data collection analysis with a professional lab.

How the mold affects the body on a cellular level.

Stachybotrys is a genus, not a species.

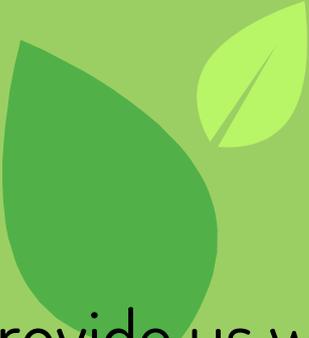
Mold growth increases because of moisture and food in buildings.

How mold affects all organisms, not just humans.

We eventually will need to adapt to more rain.

Sensitive (immunocompromised or other) students may not be able to adapt to mold.

Human activity increases climate change leading to increased rain and mold.



How you can help

Provide us with financial details about:

- 1) How much money does facilities need from the state of Virginia
- 1) How much money does facilities need from Alexandria City

To Keep Us Healthy



QUESTIONS?

ADVICE YOU WANT TO SHARE?

standing4tomorrow@gmail.com

Visit our petition at:
<https://bit.ly/2HhMB33>

Visit our Website at:
<https://standing4tomorrow.wixsite.com/health>