Where we thought we would learn.
Where we actually learn.
An **issue for decades?**

- **1935**
  - GW is built

- **1993**
  - GW becomes a middle school

- **2010**
  - Teacher shows symptoms of toxic mold poisoning

- **2012**
  - Teacher resigns due to toxic mold poisoning

- **2018**
  - Teacher resigns due to mold-related health issues
Our **Journey** this School Year

**September 2018**
- Mold and mushrooms found.
- Students begin suffering negative health effects.

**September 27, 2018**
- Evacuation Day from A109

**March 2019**
- We meet with multiple people in power.
- We are returned to classroom, porous material still present.
- We work hard on the creation of a school board policy.
Giving a voice to the affected:

MOLD WAS TESTED POSITIVE IN 15/26 CLASSROOMS
GWMS, City, & Regional Science Fair Winners:

The Effect of Water Damage on Mold Growth

Mold Inspection Network Lab Rating Scale (Concentration of Spores)

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Species Found</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scattered</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very Low</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **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?

- Yes: 42.9%
- No: 40.5%
- Maybe: 16.7%
# The effects of mold on learning

<table>
<thead>
<tr>
<th>Mold Health Effect</th>
<th>Impact on Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sinus Conditions</strong> <em>(National Institute of Health, 2013)</em></td>
<td>Day time fatigue and sleepiness</td>
</tr>
<tr>
<td><strong>Asthma complications</strong> <em>(American Lung Association, 2018)</em></td>
<td>Lack of oxygen to brain for proper function</td>
</tr>
<tr>
<td><strong>Day-time Fatigue and Sleepiness</strong> <em>(National Institute of Health, 2012)</em></td>
<td>Not being focused, distractions, test scores dropping.</td>
</tr>
<tr>
<td><strong>Chronic Lung Disease</strong> <em>(Centers for Disease Control and protection, 2017)</em></td>
<td>A leading cause of death, absenteeism, hospitalization.</td>
</tr>
<tr>
<td><strong>Liver Cancer</strong> <em>(Environmental Health Perspectives, 2005)</em></td>
<td>Liver transplants, absenteeism, hospitalization, death.</td>
</tr>
<tr>
<td><strong>Autoimmune Diseases including Lupus</strong> <em>(National Institute of Health, 2009)</em></td>
<td>Absenteeism, hospitalization, other health complications.</td>
</tr>
</tbody>
</table>

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

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
Help us be Mold Pioneers

- 35 states have mold legislation
- Virginia needs protection and safety from mold in schools
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
“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....

OLR RESEARCH REPORT

September 16, 2003

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 mitigating mold cases.

passed legislation in 2003 that addresses the issue of mold and other potential health hazards affecting indoor air quality. The act, starting January 1, 2008, local school boards periodically evaluate mold, including potential exposure to mold: the act requires that starting January 1, 2008, local school boards periodically evaluate mold, including potential exposure to mold: the act requires that starting January 1, 2008, local school boards periodically evaluate mold, including potential exposure to mold, including potential exposure to mold.

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
- Easier to add mold regulation into the existing policy (FA-R).

- We need to study the relationship between set point policies and mold growth.

- 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.

- Timeline to get into the Legislative Packet (Aug-Sept).

- Base you 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.
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.

<table>
<thead>
<tr>
<th>STANDARDS</th>
<th>HOW WE LEARNED IT</th>
</tr>
</thead>
<tbody>
<tr>
<td>The student will plan and conduct investigations.</td>
<td>Mold data collection analysis with a professional lab.</td>
</tr>
<tr>
<td>Patterns of cellular organization and their relationship to life processes.</td>
<td>How the mold affects the body on a cellular level.</td>
</tr>
<tr>
<td>How can organisms be classified?</td>
<td>Stachybotrys is a genus, not a species.</td>
</tr>
<tr>
<td>Organisms within an ecosystem are dependent on one another and on non living components of the environment.</td>
<td>Mold growth increases because of moisture and food in buildings.</td>
</tr>
<tr>
<td>Interactions exist among members of a population.</td>
<td>How mold affects all organisms, not just humans.</td>
</tr>
<tr>
<td>Organisms adapt to biotic and abiotic factors in an ecosystem.</td>
<td>We eventually will need to adapt to more rain.</td>
</tr>
<tr>
<td>Organisms (ecosystems/population) change over time.</td>
<td>Sensitive (immunocompromised or other) students may not be able to adapt to mold.</td>
</tr>
<tr>
<td>Relationships between ecosystem dynamics and human activity.</td>
<td>Human activity increases climate change leading to increased rain and mold.</td>
</tr>
</tbody>
</table>
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:
Visit our Website at:
https://standing4tomorrow.wixsite.com/health