



# YALE NATIONAL INITIATIVE

*to strengthen teaching in public schools®*

Curriculum Units by Fellows of the National Initiative  
2020 Volume IV: Solving Environmental Problems through Engineering

---

## **Mask On: Clearing the Air: the Challenges of Indoor Air Pollution on Urban Health and Academic Performance**

Guide for Curriculum Unit 20.04.11, published September 2020  
by Virginia Redwine Johnson

Deep breaths are like little love notes to your body. – Author Unknown

This unit intends to highlight the importance of breathing and the impact that indoor air quality has on children’s health. The unit specifically dives into the manner of which poor air quality is associated with chronic illnesses like asthma. These illnesses are linked to student performance and their overall success. Asthma is increasing in the U.S. In my elementary class, I remember being one of two students with asthmatic symptoms requiring an inhaler during the cold months. Now, in my own class, there are more students relying on tools to help their airways because of their asthmatic diagnosis. In my three elementary classes, there were approximately five students in each class that were coded as asthmatic.

Air pollution is a major component of our daily lives whether it is inside or outside of the home, but we often only focus on the air quality outside. There’s no secret that outside pollutant emitters such factories, industries, chemical plants, and automobiles contribute chemicals and particles to the air we breathe, but being that 90% of time is spent inside, this unit is going to look into the pollutants that harm breathing inside. It is my goal for students to study the cause and effects that our home environment has on respiratory issues and have students develop a better understanding of the correlation between health and academic success.

(Developed for Math, Science, and ELA, grade 5; recommended for Science and Math, grades 3-4)

---

<https://teachers.yale.edu>

©2023 by the Yale-New Haven Teachers Institute, Yale University, All Rights Reserved. Yale National Initiative®, Yale-New Haven Teachers Institute®, On Common Ground®, and League of Teachers Institutes® are registered trademarks of Yale University.

For terms of use visit [https://teachers.yale.edu/terms\\_of\\_use](https://teachers.yale.edu/terms_of_use)