



HEALTHIER WORKPLACES | A HEALTHIER WORLD

Public Policy Priorities

Strengthening the OEHS Professional Pathway and Improving the Learning and Working Conditions of Schools

The Challenge and Need for Action

AIHA has begun a new initiative to encourage more member involvement in the promotion of occupational and environmental health and safety (OEHS) as a career. We recognize there is a shortage of new professionals entering OEHS and are taking additional action to address this issue now before it becomes a greater crisis.

When working to improve workplace and community health and safety, we know that businesses, schools, governments, and other groups have an opportunity to make better decisions to solve the OEHS risks they confront; however, they often lack awareness of potential hazards or do not possess the technical expertise needed to control hazardous conditions.

For instance, there can be a lack of awareness of hazards associated with the site of a school, materials used to construct, systems within, or past uses of the school building. Examples of potential hazards within these areas include:

- **Site:** Soil and groundwater contamination from hazardous waste, soil vapor intrusion, radon.
- **Materials used to construct the school building:** Asbestos, lead, mercury, oil-containing devices, tanks, PCBs.
- **Building envelope:** Deficient roofing, windows, and grading, which can lead to water intrusion and mold growth.
- **Systems within the school building:** Heating, ventilation, and air conditioning (HVAC), plumbing, and electrical system deficiencies, which can lead to poor indoor environmental quality.

- **Occupant use:** Mercury contamination in laboratories and the health suite (e.g., broken barometers, thermometers), metals in photography labs, pesticides and herbicides from ground maintenance, etc.

Other hazards may be present in and around schools. OEHS professionals can help students, parents, school personnel, communities, and other key stakeholders better understand the hazards that are present in schools and how to manage risks to improve learning and working conditions.

With more OEHS professionals, we can protect more workers, students, and businesses, helping communities flourish; to meet these challenges, however, we must fill and sustain the OEHS workforce pathway.

Because the built environment of schools greatly influences student learning and serves as a worksite for school personnel, improving school infrastructure is a key component of strengthening the OEHS workforce pathway that also benefits communities on a broad scale.

Strengthening the OEHS Workforce Pathway

Most people are not yet familiar with OEHS as a profession. This lack of awareness contributes to the false impression that additional OEHS professionals are not needed. Additionally, businesses, particularly smaller businesses, may be unable or unwilling to pay for OEHS professional services, which contributes to low demand for services, although the need remains high.

Except in cases of acute physical trauma, occupational injury, and illness causality can be difficult to prove, which can make it challenging for some businesses to justify OEHS-related spending unless they are required to do so by government regulations or contractual obligations.

If non-technical stakeholders (e.g., the public) are unaware of or undervalue the need for OEHS services, it makes it more difficult for policymakers to prioritize and fund OEHS agencies and projects, further contributing to low demand and the illusion that additional OEHS professionals are not needed.

Improving School Infrastructure

Improving the learning and working conditions of schools faces three primary challenges:

- 1) A lack of awareness of where potential hazards may exist.
- 2) A lack of technical expertise to select the right solutions, based on interests, needs, and local contexts, to identify and mitigate hazards.

3) A lack of funding.

Many public schools in the United States were constructed when hazardous building materials were used, including lead paint, asbestos-containing building materials, PCB ballasts in fluorescent lamps, mercury in thermostats, etc. Additionally, many of the HVAC systems in school buildings are antiquated and not designed to comply with ASHRAE Standard 62.1 Ventilation and Acceptable Indoor Air Quality, which establishes criteria for healthful and safe air conditions, including temperature, humidity, air contaminants, airflow, and outdoor air a source of indoor air for new and existing buildings.

Health and safety hazards are present in many areas of a school, including shops, art studios, theaters, and dining facilities, which can expose students, teachers, other school personnel, and visitors to hazardous materials and hazardous equipment. Hazards, such as noise and thermal stress, are also present in music and athletic-related activities and areas. In order to identify, evaluate, control, and mitigate these and other hazards in and around schools, superintendents, school boards, principals, teachers, other school personnel, parents, and teachers all need and would benefit from health and safety training.

On the matter of funding, the 2021 State of Our Schools report revealed chronic underfunding of maintenance and repairs for aging school buildings. On average, our nation's schools are approximately 54 years old (built in 1968). Additionally, a 2020 U.S. Government Accountability Office report found that "41 percent of districts required HVAC systems upgrades or replacements in at least half of their schools. In addition, 20 to 35 percent of all school districts had serious deficiencies in at least half of their roofing, lighting or safety and security systems."¹

There are approximately 140,000 schools in the United States (133,000 elementary and secondary schools and 7,000 institutions of higher education). Working together with parents, teachers, school leaders, policymakers, businesses, other allied stakeholders, and the media, we can improve the learning and working conditions of schools while encouraging more students to pursue careers in OEHS – a noble, well-paying profession.

Recommended Solutions

The following is a list of actions that AIHA members, governments, businesses, nonprofits, and other stakeholders can take to improve the learning and working conditions of schools and encourage more students to pursue careers in OEHS. While it may not be possible to pursue all these actions immediately, progress on any of them represents a step forward.

¹ https://www.buildusschools.org/s/SOOS-IWBI2021-2_21CSF-print_final.pdf

Strengthening the OEHS Workforce Pathway

- Encourage AIHA members to inspire students to pursue careers in OEHS and improve the learning and working conditions of schools. **Learn more in Appendix A below.**
- Encourage policymakers to ensure that all students everywhere, regardless of zip code, have access to high-quality science, technology, engineering, the arts, and mathematics (STEAM) courses in elementary and secondary schools.
- Support the new development and strengthening of existing OEHS apprenticeship programs, including those involving high school or college students.
- Encourage investments in OEHS education programs and co-op opportunities by the private sector.
- Work with policymakers, secondary schools, colleges, universities, businesses, and nonprofits to increase student enrollment in existing OEHS college programs.
- Encourage Federal, State, and local governments to recognize a “Workplace Health and Safety Week”, modeled after Engineers Week.²
- Work with governments, nonprofits, and businesses to encourage an increase in the number of OEHS generalists and “technician-level” practitioners who are working with only a high school diploma or equivalent or are pursuing or have received a two-year associate’s degree.
- Encourage OEHS generalists and technician-level practitioners to explore the IH Professional Pathway³ to determine whether they wish to move to the next OEHS career level.
- Support new legislation and existing programs that allow secondary school students to earn high school graduation credits by completing an OSHA 10- or 30-hour training.
- Support new legislation and existing programs that allow secondary school students to earn credits applicable toward OEHS college degrees.
- Maintain and grow NIOSH’s Education and Research Centers (ERCs), which are university-based multidisciplinary centers that educate and train the current and next generation of OEHS professionals.⁴

² <https://www.nspe.org/resources/partners-and-state-societies/engineers-week>

³ <https://www.aiha.org/ih-careers/ih-professional-pathway>

⁴ https://www.cdc.gov/niosh/extramural-programs/php/about/ercs.html?CDC_AAref_Val=https://www.cdc.gov/niosh/oep/ercportfolio.html

- Promote careers in OEHS by working with the U.S. uniformed services, which include the Army, Marine Corps, Navy, Air Force, Space Force, Coast Guard, Public Health Service Commissioned Corps, and the National Oceanic and Atmospheric Administration Commissioned Officer Corps.
- Work with the U.S. uniformed services to promote OEHS training and certification. This will help decrease occupational injuries, illnesses, and deaths in the uniformed services and prepare those in or exiting the military for successful careers in OEHS.
- Support NIOSH's Health Hazard Evaluation (HHE) Program, which helps employees, unions, and employers learn whether health hazards are present at their workplaces and recommends ways to reduce hazards and prevent work-related illness. NIOSH HHE's are done at no cost to the employees, unions, or employers.⁵
- Encourage increased use of OSHA's On-Site Consultation Program, which offers no-cost and confidential occupational safety and health services to small- and medium-sized businesses, with priority given to high-hazard worksites, and does not result in penalties or citations.⁶
- Encourage increased use of OSHA's Voluntary Protection Programs, which recognize employers and workers in private industry and Federal agencies who have implemented effective health and safety management systems and maintain injury and illness rates below the U.S. Bureau of Labor Statistics averages for their respective industries.⁷

Improving School Infrastructure

- Support the Federal, State, and local investments in school infrastructure to improve the learning and working conditions of schools.
- Advocate for establishing an OEHS task force at each school. This task force should be empowered by the superintendent and school committee to develop policies and procedures for every employee in each school's academic, administrative, and operations (facilities operation and maintenance) divisions.
- Advocate for establishing an Office of School Infrastructure and Sustainability at the U.S. Department of Education.
- Advocate for re-establishing a national clearinghouse on educational facilities within the Federal government.

⁵ <https://www.cdc.gov/niosh/hhe/default.html>

⁶ <https://www.osha.gov/consultation>

⁷ <https://www.osha.gov/vpp>

- Support congressional legislation directing the U.S. Secretary of Education to provide \$50 million to State departments of education so they can provide technical assistance and training to improve the learning and working conditions of schools, particularly in high-need school districts.
- Support the enactment of the Reopen and Rebuild America's Schools Act in the U.S. Congress.⁸
- Advocate for legislation that would require annual, comprehensive safety, health, and security inspections for all school facilities.

Industries and Groups that AIHA Will Focus On

The following is a list of industries and groups that are key to increasing the number of OEHS professionals and improving the learning and working conditions of schools. AIHA is open to working with all stakeholders who share our commitment to strengthening the OEHS professional pathway and improving school infrastructure.

- Building rating and recognition programs
 - Green Building Initiative (GBI)
 - U.S. Green Building Council (USGBC)
- Civic groups
 - 4-H
 - Big Brothers Big Sisters of America
 - Boys & Girls Clubs of America
 - Boy Scouts of America
 - Girl Scouts of America
 - YMCA
- Construction/built environment
 - Air Conditioning Contractors of America (ACCA)
 - Air-Conditioning, Heating, and Refrigeration Institute (AHRI)
 - Alliance to Save Energy (ASE)
 - American Institute of Architects (AIA)
 - American Society of Interior Designers (ASID)
 - American Society of Landscape Architects (ASLA)
 - American Society of Mechanical Engineers (ASME)

⁸ <https://www.congress.gov/bill/117th-congress/senate-bill/96>

- American Society of Civil Engineers (ASCE)
- ASHRAE
- American Speech-Language-Hearing Association (ASHA)
- Building Owners & Managers Association International (BOMA)
- Healthy Schools Campaign
- International Association of Plumbing and Mechanical Officials (IAPMO)
- International Code Council (ICC)
- National Association of State Energy Officials (NASEO)
- National Electrical Contractors Association (NECA)
- National Electrical Manufacturers Association (NEMA)
- National Fire Protection Association (NFPA)
- National Institute of Building Sciences (NIBS)
- National League of Cities
- Sustainable Buildings Industry Council (SBIC)
- Guidance counselors
 - American Counseling Association (ACA)
 - American School Counselor Association (ASCA)
- Institutions of higher education
 - Association of American Universities (AAU)
 - American Association of Colleges for Teacher Education (AACTE)
 - American Association of Community Colleges (AACC)
 - American Association of State Colleges & Universities (AASCU)
 - American Association of University Professors (AAUP)
 - American Indian Higher Education Consortium (AIHEC)
 - American Society for Engineering Education (ASEE)
 - Higher Education Consortium for Special Education (HECSE)
 - Hispanic Association of Colleges and Universities (HACU)
 - National Association for Equal Opportunity in Higher Education (NAFEO)
- Landscaping
 - American Society of Landscape Architects (ASLA)
- Parent-teacher groups
 - National Parent Teacher Association (PTA)
- School districts and boards
 - Association of School Business Officials International (ASBO)
 - Council of Chief State School Officers (CCSSO)
 - Council of the Great City Schools (CGCS)
 - National Association of State Boards of Education (NASBE)
 - National School Boards Association

- School leaders
 - AASA, The School Superintendents Association
 - American Council on Education (ACE)
 - American Federation of School Administrators (AFSA)
 - American Federation of State, County, and Municipal Employees (AFSCME)
 - Learning Disabilities Association of America (LDA)
 - Magnet Schools of America (MSA)
 - National Alliance of Public Charter Schools
 - National Alliance for Insurance Education & Research, Certified School Risk Manager (CSRMA) designation
 - National Association of Elementary School Principals (NAESP)
 - National Association of Secondary School Principals (NASSP)
 - National Council on School Facilities (NCSF)
 - School Leaders Risk Management Association (SLRMA)
- Students
 - Key Club International
- Teachers
 - American Federation of Teachers (AFT)
 - National Education Association (NEA)
- Vocational educational programs
 - Association for Career & Technical Education (ACTE)

Take Action Now

Contact:

AIHA Government Relations Department

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About AIHA

AIHA is the association for scientists and professionals committed to preserving and ensuring occupational and environmental health and safety in the workplace and community. Founded in 1939, we support our members with our expertise, networks, comprehensive education programs, and other products and services that help them maintain the highest professional and competency standards. More than half of AIHA's nearly 8,500 members are Certified Industrial Hygienists and many hold other professional designations. AIHA serves as a resource for those employed across the public and private sectors as well as the communities in which they work. For more information, please visit www.aiha.org.

Appendix A

How To Set Up Meetings with Students, Teachers, Guidance Counselors, School Nurses, or School Leaders

1. Craft a universal pitch, which you'll use as a base for crafting a more detailed pitch when seeking a meeting with students, teachers, guidance counselors, school nurses, or school leaders. A step-by-step guide for creating a universal and school-specific pitch can be found in the [section below](#).
2. Using a service such as [Google Maps](#), identify the schools in your area and create a list of schools you'd like to visit.
3. For each school you'd like to visit, explore their website and take note of factors such as the grade levels taught at the school, student demographics, academic programs, and anything else that stands out. Try to get a sense of what each school values the most and what their brand is. What types of things are missing from their website that you'd like to see (e.g., content about careers in occupational and environmental health and safety [OEHS]; goals the school has related to OEHS; how the school is working to protect the health and safety of students, staff, and visitors). Write these things down and take them with you when you visit each school.
4. Craft a more detailed pitch for each school you'd like to visit, using your universal pitch as a base. Information on how to craft a detailed pitch can be found in the [section below](#).
5. Contact each school and request a meeting with the school principal or a teacher, using your detailed pitch for each school as a script or talking points. A step-by-step guide for contacting schools can be found in the [section below](#).
6. Confirm the date and time of each meeting.
7. Hold the meetings.
8. Continue the conversation and deepen your relationships by following up after each meeting by sending a Thank You email that includes helpful resources and any action items that can be immediately completed. Be sure to list other medium and longer-term action items or ideas that arose during or after your meeting.
9. Share your experiences with our Government Relations Department (GR@aiha.org), as well as your Local Section.

Crafting Your Pitch

Before contacting a school, make sure you have your pitch ready. Your pitch is your purpose for seeking a meeting with students, teachers, guidance counselors, school nurses, or school leaders. When requesting a meeting, you'll use your pitch as a script or talking point.

There are two pitches you should create:

1. Your universal pitch.
2. Your more detailed, school-specific pitch.

Universal Pitch

Your universal pitch is the core reason why you'd like to meet with students, teachers, guidance counselors, school nurses, or school leaders. Examples include:

- Encouraging students to pursue careers in OEHS.
- Helping students stay safe in their communities and at after-school or summer/winter jobs.
- Improving the learning and working conditions of schools.

You'll want your pitch to include two key elements: A problem and a solution. Here's an example:

"Hi, my name is Alex. I'm a nearby resident working in the field of occupational and environmental health and safety (OEHS). It's a deeply rewarding career where I get to help protect the health and safety of people in our community. The average starting salary is \$58,300, and in just 10 years, the average salary goes to \$113,600. We need more people in my profession, and since I live near your school, I figured I'd reach out and see if I can meet with some students about pursuing a career in OEHS, including local opportunities to get involved right away. I'd also like to share my own story of how I got into the profession. What are the next steps for meeting with students in your school?"

School-Specific Pitch and Presentation Prep

When you're crafting your school-specific pitch and presentation for a meeting with students, teachers, guidance counselors, school nurses, or school leaders, you have options. You can deliver a high-level presentation on OEHS, focusing on your story, the type of work that you and others in your profession perform, and how the profession is deeply rewarding.

Alternatively, you could tailor your presentation to fit with what's currently being taught in the class you're visiting. That requires a bit more research, but it might be easier to secure time to meet with students, since time is limited, and teachers have a lot of content to cover with their students. Anything you can do to frame your meeting request as something that adds to what students are already doing, rather than an irrelevant distraction that takes time away from other things, will help build your relationships with teachers and make it more likely you'll land meetings.

Questions to Ask Yourself When Crafting Your School-Specific Pitch and Presentation

The number one question you want to ask yourself when preparing for a meeting with students, teachers, guidance counselors, school nurses, or school leaders is:

- What would I like to discuss?

Next, answer the following questions:

- Why would you like to discuss those topics?
- What are your goals for your presentation?
- What would "success" look like?
- What do I need to happen to be successful? How can I influence the outcome?

Write down your answers to each of these questions.

Scenarios

The environment plays a big role in your presentations. There are two types of scenarios you'll likely present in:

- 1) An auditorium filled with students, likely from multiple classes or grade levels.
- 2) A classroom.

Presentations delivered in an auditorium tend to be higher level, however, they can also be used for a larger demonstration of OEHS-related products or techniques, similar to what you'd see on the trade show floor at AIHce EXP.

Presentations delivered in a classroom can be high-level, involving your own journey into OEHS, but they can also feature activities that engage students and fit within the curriculum of the class you're visiting.

Resources for Higher-Level Presentations

If you opt to deliver a high-level presentation, focusing more on the OEHS profession and your own journey, rather than fitting into educational requirements, AIHA has a treasure trove of resources, most of which can be found at <https://www.aiha.org/ih-careers/discover-industrial-hygiene>.

Resources for More In-Depth Presentations

When you've decided to deliver a more in-depth presentation, AIHA has you covered with several key resources, including:

- <https://www.aiha.org/get-involved/safety-matters-center>
 - This is AIHA's Safety Matters Center, which features content focused on helping students stay safe on the job by teaching them how to identify, mitigate, and respond to OEHS hazards. This is a great set of resources to help students build vital OEHS-related skills.
- <https://www.cdc.gov/niosh/talkingsafety/default.html>
 - This is NIOSH's Youth@Work – Talking Safety program. This program includes state-specific curriculum designed to help reduce occupational injuries and illness among youth.

Since this is a more in-depth presentation, you'll want to answer a few additional questions. These require a bit more research, but you'll come out of it with a much better appreciation of the pressures that students, teachers, guidance counselors, school nurses, or school leaders face, which may help you understand how your presentation meets their needs and goals.

The in-depth questions you'll want to answer include:

- How does the content of your presentation fit into the district and state's educational requirements?

- What are the State's and district's educational requirements? Note that depending on where you live, there might be multiple school districts nearby, each with potentially different educational requirements. You'll want to research what's required in each school district you plan on visiting.
 - Researching educational requirements can be daunting; use these [key resources](#) to make it less scary and maybe even fun.
- What is the profile of the school? Take note of factors such as:
 - Location
 - Demographics
 - Academic programs

How to Identify, Contact, and Set Up Visits to Schools Where You Live

Before contacting a school, make sure you have your pitch ready. Your pitch is your purpose for seeking a meeting with students, teachers, guidance counselors, or school leaders. The [section above](#) outlines how to craft your pitch.

1. Search for schools in your area using a service such as [Google Maps](#).
2. Use Microsoft Word or a similar tool to make a list of the schools you'd like to visit.
3. Visit each school's website and look for a school visitor policy.
 - a. The school visitor policy will often direct you to contact the school's principal to request access to the school and make arrangements to meet with students.
 - i. Note: If the school's website doesn't list a visitor policy or you're just having trouble finding it, call or email the school principal and they'll help you out.
 - b. Before contacting the principal, it's a good idea to research the school, its classes, and teachers.
 - c. The principal will likely ask you to coordinate with a teacher and may facilitate an introduction.

- i. If you already have a connection with a teacher whose class you'd like to meet with, then request assistance from that teacher in scheduling a visit with their students, keeping in mind that approval from the principal to visit the school may still be required.
4. Before contacting a principal or teacher, consider what you'd like to discuss with students, and how it fits into their educational requirements. Research educational requirements using these [key resources](#).

Tips for Meeting with Teachers

- Understand their challenges, pressures, goals, and expertise. The challenges that teachers face include:
 - Student performance and widening achievement gaps as students, teachers, and educational institutions recover from the pandemic.
 - The capacity to teach many subjects in a relatively short period of time. Where can teachers get the support they need if they are at capacity (which many of them are)? Perhaps AIHA members can help.
 - Addressing violence and disruptive behavior.
 - Pressures from parents/guardians.
 - Time for professional development. In addition to teaching students, teachers themselves need to be taught. Where will they get this professional development and where will they find the time and funding for it?
- Set the tone of the meeting, focusing on collaboration and building a strong relationship (we're all on the same team and have similar or the same goals).
- Clearly convey why you'd like to meet with their students, including your goals and how your presentation might fit into educational requirements or school programs.

Tips for Meeting with School Guidance Counselors

- Focus on your own story and journey into OEHS.
- Highlight how rewarding the OEHS profession is:
 - OEHS professionals protect the health and safety of workers and communities.
 - The average starting salary of an OEHS professional is \$58,300, and in just 10 years, the average salary goes to \$113,600.
- Discuss the many interesting job sites and types of an OEHS professional. AIHA's online comic books, free-to-play video games, and videos are a great way to discuss these topics. You can find those resources at <https://www.aiha.org/ih-careers/discover-industrial-hygiene/i-am-ih>
- Highlight the college career and post-college path of an OEHS professional.
- Provide examples of opportunities for students to become immediately involved in OEHS, including mentorships, internships, apprenticeships, local jobs, and AIHA Local Sections.
- Key resource: <https://www.oehscareers.org/aiha-guidance-counselors>

Tips for Meeting with School Principals or Vice Principals

- Understand their challenges, pressures, goals, and expertise. The challenges that school leaders face include:
 - Keeping schools open amidst threats such as infectious diseases and school violence.
 - Improving student performance as we emerge from the pandemic.
 - Attending to the mental health needs of students and staff.
 - Addressing staffing shortages by attracting and retaining high-quality teachers and other school personnel.
 - Addressing staff who seek to undermine decisions.
 - Promoting a healthy, safe, and welcoming school culture.
 - Managing the school's budget.
 - Managing school building operations and maintenance needs.
- Come prepared with knowledge of the school, district, and State.
- Highlight the impact of your profession in the community.
- Come up with ideas for how students, teachers, and parents could get involved with OEHS.
- Be prepared to talk about how to improve the learning and working conditions of schools.

Tips for Meeting with School Nurses

- Discuss how medical professionals and practitioners are connected within the overall OEHS landscape.
- Although it could be somewhat unfamiliar for school nurses, it may be helpful to identify the links between OEHS initiatives, student and school worker health and well-being, and potential medical surveillance programs/requirements in industry and construction, etc.
- Discuss the influence of the built environment on student and worker health, safety, and learning/performance.

Key Resources

School & District Navigator

<https://nces.ed.gov/ccd/schoolmap/>

An easy-to-use map-based search tool for identifying school districts and schools in your area.

National Center for Education Statistics

<https://nces.ed.gov/ccd/schoolsearch/>

Use this to find basic information about a school, such as its address, phone number, website, grade span, total students, students per grade, and student demographics.

Education Demographic and Geographic Estimates

<https://nces.ed.gov/programs/edge/acsdashboard>

Use this to find infographics about school districts, including total population, median household income, total households, households with broadband internet, languages spoken at home, percentages of families with income below the poverty level, the educational attainment of parents whose children attend public school, how the district compares to the rest of the State and nation, and more.