

TOOLS FOR TECHS

The “Tools for Techs” program addresses the unique indoor air quality issues found in Technical High Schools. Technical High Schools are essentially mini industrial complexes because many of the classrooms (shops) are devoted to teaching trades. Carpentry, Welding and Heating Ventilating and Air Conditioning (HVAC) shops may be found on one wing of a Technical High School. Another wing may be devoted to Automotive Technology, Culinary Arts and Hairdressing, Cosmetology and Barbering. The students and staff in the shops are potentially exposed to the emissions associated with these trades. Students, teachers and administrators from neighboring classrooms and offices may be affected by these exposures as well.

In addition to the exposures associated with emissions from the trades, Technical High Schools have many of the same indoor air quality problems found in other schools. Technical High School teams also need training on topics such as reducing the risk factors associated with microbial growth; enhancing the effectiveness of classroom ventilation systems and minimizing exposure to construction/renovation emissions.

Twelve trade-specific checklists were developed and the walkthrough training program enhanced so that teams from Technical High Schools could address the control of emissions from the technical trades.

The program involves two four hour training sessions. The first training session is a general overview of the Tools for Techs program. The teams receive a packet of the twelve trade-specific checklists; the second training covers conducting a walkthrough building review. During the “walkthrough training” the teams review the information gathered from both the Teachers’ and Shop Specific Checklists. The teams then prioritize and summarize their recommended interventions in a report to school district.

Traditional high schools that teach technologies have found the checklists and training materials useful.

“Tools for Techs”

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In 2006 the Connecticut Department of Public Health, the Connecticut School Indoor Environment Resource Team (CSIERT), the Connecticut Technical High School System, the State Vocational Federation of Teachers / American Federation of Teachers and the University of Connecticut Health Center launched a program: “Tools for Techs”. The program addresses the unique indoor air quality issues found in Technical High Schools.

“Tools for Schools” in Connecticut: The Environmental Protection Agency’s (EPA) Tools for Schools (TfS) program has been implemented in almost 700 Connecticut schools. The program has led to indoor air quality improvements because TfS committees (teams representing administration, teachers, nursing, custodial staff, students and parents) have successfully used the program’s checklists to identify indoor air quality risk factors and set intervention priorities.

Connecticut’s Technical High Schools: Connecticut has seventeen Technical High Schools and three Technical Education Centers. Over 1200 teachers and staff work in these schools and approximately 11,000 students are enrolled. Technical High Schools are essentially mini industrial complexes because many of the classrooms (shops) are devoted to teaching trades. Carpentry, Welding and Heating Ventilating and Air Conditioning (HVAC) shops may be found on one wing of a Technical High School. Another wing may be devoted to Automotive Technology, Culinary Arts and Hairdressing, Cosmetology and Barbering. The students and staff in the shops are potentially exposed to the emissions associated with these trades. Students, teachers and administrators from neighboring classrooms and offices may be affected by these exposures as well. Potential emissions include welding and soldering fume from the Welding or HVAC shops; combustion products from Culinary Arts kitchens or Auto Technologies shops; wood dust, stains and lacquer from the Carpentry shops and acrylates and solvents from the HCB classrooms. These emissions are hazardous if exposures are not controlled.

In addition to the exposures associated with emissions from the trades, Technical High Schools have many of the same indoor air quality problems found in other schools. Technical High School teams also need training on topics such as reducing the risk factors associated with microbial growth; enhancing the effectiveness of classroom ventilation systems and minimizing exposure to construction/renovation emissions.

“Tools for Techs”: The Tools for Techs program was initiated with pilot funding from the American Federation of Teachers and the CT State Department of Education with two goals in mind: the development of trade-specific checklists and the enhancement of the walkthrough training program so that teams from Technical High Schools could address the control of emissions from the technical trades. Although checklists focused on safety and regulatory compliance have been published by NIOSH (Safety Checklist Program) and the EOHS Institute at Rutgers (Safe Schools: A Health and Safety Check) checklists focused on chemical exposure controls in schools are lacking.

The Tools for Techs program has been launched at six Connecticut Technical High Schools. Multidisciplinary committees from these schools attended two four hour training sessions.

During the first training session the teams were given a general overview of the Tools for Techs program. During this training the teams received a packet of twelve trade-specific checklists. The teams were encouraged to distribute the checklists to staff in their school.

During the second training session team members learned how to do a building review. In addition to the general overview of IAQ issues the walkthrough training program included a unit on pollutant pathways and chemical control strategies: substitution, local exhaust ventilation, work practices and personal protective equipment. During the "walkthrough training" the teams reviewed the information gathered from both the Teachers' and Shop Specific Checklists. The teams were encouraged to prioritize and summarize their recommended interventions in a report to school district.

The program to date has been very well received. The program addresses the unique indoor air quality concerns in technical high schools. In addition, the traditional high schools that teach technologies would find the checklists and training materials useful. The checklists have been posted on the UConn Heath Center's website at http://www.oehc.uchc.edu/CIEH_TfT.asp