

# Indoor Air Quality Design Tools for Schools



The U.S. Environmental Protection Agency (EPA) has developed a new Web resource entitled *Indoor Air Quality (IAQ) Design Tools for Schools*. It was designed to help school districts and facility planners design the next generation of learning environments so that the school facility will help—rather than hinder—schools in achieving their core mission of educating children.

Approximately 56 million Americans—or 1 in 5 people—spend a

**Smart Design +  
School Construction/  
Renovation =  
Healthier and Higher  
Performing Kids**

significant portion of their day in one of the 117,000 public and private primary and secondary schools. To keep pace with population growth, reduce overcrowd-

ing, and comply with class-size reduction mandates, it is estimated that 6,000 new schools will need to be built in the next several years. Many thousand more schools will have to be renovated as districts continue to upgrade deteriorating school facilities.

Facility designers and school officials are increasingly embracing “high performance” school designs, which use an integrated whole building approach to school planning that incorporates current technology to protect health while saving energy, natural resources, and money. For example, a typical 450-student elementary school today pays over \$45,000 annually for energy related utilities. Incorporating energy efficient design improvements into the design and building of the school could save that school \$13,000 annually.

These savings do not include the potential benefits of improved occupant health, productivity and performance from integrating high performance design features.

*IAQ Design Tools for Schools* complements the *IAQ Tools for Schools* Program, which helps existing schools prevent and solve IAQ problems.

*IAQ Design Tools for Schools* provides voluntary guidance for school personnel, architects and engineers, builders and contractors, parents and the community on key school construction and renovation issues such as:

- **Incorporating high performance building features into the design process.**
- **Controlling pollutants and their sources.**
- **Selecting and designing heating, ventilating and air conditioning systems.**
- **Controlling moisture to prevent mold and damage to building materials and systems.**
- **Remediating mold.**
- **Specifying and maintaining portable classrooms.**
- **Renovating existing schools.**
- **Providing links to resources on a wide range of high performance construction issues, such as acoustics, daylighting, life-cycle costing, commissioning, and more.**

*IAQ Design Tools for Schools* draws from EPA expertise as well as other resources that have emerged from state and private sector initiatives.

Visit: <http://www.epa.gov/schooldesign>