

THE ARCHITECTURE HANDBOOK 2

OVERVIEW

The Architecture Handbook 2 [working title, currently in development] is an interactive digital curriculum for upper level high school students and educators that teaches the design and construction of green schools. This new digital curriculum builds on *The Architecture Handbook: A Student Guide to Understanding Buildings*, published by the Chicago Architecture Foundation (CAF) in 2007. Currently the book is used in 180 classrooms in 40 states and 8 countries.

A pilot team of students, teachers, and architects will begin testing the Beta site of the student components in fall 2009, with an anticipated national launch in fall 2010.

The project is made possible in part, due to the generous funding of a 2008 Incentive Grant for Green Building Curriculum from the United States Green Building Council (USGBC).

WEB COMPONENTS

PART 1: ThinkSpace

A series of online lessons, readings, math problems, science experiments, articles, vocab, resource lists, video clips, and hands-on activities will teach architectural concepts and skills through the study of green schools and other institutional buildings. Each curriculum project is paired with a case study of an innovative green school building. The six case study schools (two in Chicago and four nationwide) will illustrate larger architectural concepts, including society, site, space, structure, systems, and skin. A seventh thematic project, 'stuff,' encompasses smaller objects, such as lockers, desks or bike racks, designed for schools. Sustainable design and construction principles will be emphasized as students work through twenty-seven 'chapters', which highlight the issues within the larger student design projects of Part 2: DesignSpace.

PART 2: DesignSpace

This portion of the website will allow students to become active participants in the design process and the discussion of architectural ideas. An online resource-sharing community will be comprised of students' peers in the actual classroom, as well as other high school students, teachers, and practicing architects from around the world.

To begin, students or their teachers will choose from one of several posted architectural design problems relating to the design of schools. The design problems will range in scale from small projects, such as redesigning the layout of furniture in a classroom, to large projects, such as designing an addition to a school. By uploading original text, photographs, sketches, and/or 3D digital models of unique solutions, students will be able to document stages in the design process.

At each stage of the process, students will post questions regarding their design problem to an online community. Students will receive feedback, comments, and encouragement from other students, teachers, and architects within this global community. As students encounter challenges, architects and other teachers will be able to provide feedback and direct students to other case study examples and more information in Part 1: ThinkSpace.

PART 3: Teacher Forum

Teachers will have a distinct secure forum for posting questions to peers and architects within the curriculum's online community. They will be able to share best practices, solicit new ideas and resources, and tap into a global network of other teachers and architecture professionals to strengthen their teaching skills and increase their knowledge of architecture. The purpose of the Teacher Forum is to bring the profession into the classroom, keeping teachers current with real world architectural and engineering trends.

PART 4: Teacher Interdisciplinary Materials

Cross-curricular materials, resources, experiments, and hands-on activities exploring schools and sustainable architecture will be included for science, math, language arts, social sciences, and fine arts teachers. These individual modules will comply with state and national academic standards and will be able to stand alone as three- to five-day lessons or hands-on activities.

LEARNING OBJECTIVES / HIGH SCHOOL STUDENTS

- use of six-step design process
- identify key architectural ideas in the design and construction of schools
- explain what it means to design and build a sustainable school building
- design unique sustainable solutions for diverse small and large design problems
- present and defend design solutions to other students, teachers, and architects
- serve as peer reviewers for the design projects of their classmates
- compare and contrast the design of their own school with the design of significant green schools and institutional buildings around the world
- explain connections between architecture and skills in their core academic subjects, including language arts, math, science, social sciences, fine art, and technology
- make informed career and higher education choices in the fields of architecture, engineering, and construction

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