

INTRODUCTION



When we look at our
cities, we see ourselves.

We hope our children
will like what they see.

CUBE, 1993

What Is Box City?



An Interdisciplinary Experience in City Planning

At CUBE (Center for Understanding the Built Environment), people often ask, “Which is the one best activity which teaches the most about our cities and how they work?” All of the educators, architects and city planners who participate in our school programs would agree that **Box City** is a total learning activity which incorporates the knowledge base, skills, content relevance and citizenship values which are the “givens” for built environment education. A real city is too large in scale for students to handle. By reducing that scale, they are able to understand how a city works and the interdependency between the citizens, the buildings and nature. The fact that it can be offered in one session, as an introductory activity—such as at a festival—or over a semester or year as an in-depth school experience adds needed flexibility.

All of the skills which are a part of the emerging assessment changes show up during the **Box City** exercise. Team work and cooperative learning, participation, creative thinking, critical thinking, decision making and opportunities for developing confidence and reinforcing self esteem, multicultural issues, “real life” or community-referenced curriculum, and an integration of core curriculum are inherent in the **Box City** process.

Kathleen Hunter, past director of education, National Trust for Historic Preservation, says, “Schools teach children **about** democracy, but few teach children how to be effective **in** a democracy. Most children never get to actually experience being a part of the process. They never get to explore real issues, consider real alternatives, make up their own minds, take a stand and voice their opinions.” The **Box City** exercise allows students to practice these skills and prepares them for the actuality of being involved in the city. And... it is not too early for them to start. There are many examples of students who have made a difference in their cities, and at an early age. One of those examples: students in an area which is rapidly becoming urbanized, saved a round barn. Hunter cites others in the various materials which she published for the National Trust.

Once you have involved kids in **Box City**, the likelihood is that they will want to do more. Peter Barricelli, Maine, who builds a city over a three year period, notes that after the presentation has been made to the school board and the project is “technically” over for the year, the students are reluctant to move on and want to create additional buildings. It



Students, Our Lady of Guadalupe School



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will be interesting to see if his students “come home” to view the expanding city after they have moved on to other grades. Barricelli’s experience also included the following. His students’ city was developing so well that he invited adjoining classrooms to come and view the project. These grades also decided that they would like to contribute to the city. They are developing a water treatment plant, to scale, and will build it after their visit to the local waterworks.

Box City is valuable as a teaching tool for adults as well. Ramona Mullahey, Honolulu planner, has used it to sensitize adults in a planning project for Kapuna. In 1993, she used it to target adults who are members of neighborhood organizations. Architects have used it as an informal way to educate school district patrons about the issues and challenges, not just the design elements, which are a part of any new school planning process.

The CUBE **Box City** experience, that is, the building of a city with easily manageable modular boxes in 4," 5," and 6" sizes, was developed by architects, planners and educators, and has been tested with all ages. Boxes are sized to accommodate enough industrial, commercial, civic and residential buildings to form a representative city. The boxes are decorated with paper, paint or rubber stamps to encourage a developing knowledge of architectural details and styles. The “building” of the city itself teaches city planning concepts, and an understanding of neighborhoods and citizenship roles. The curriculum contains suggestions for pre- and post-activities. All ages can participate.

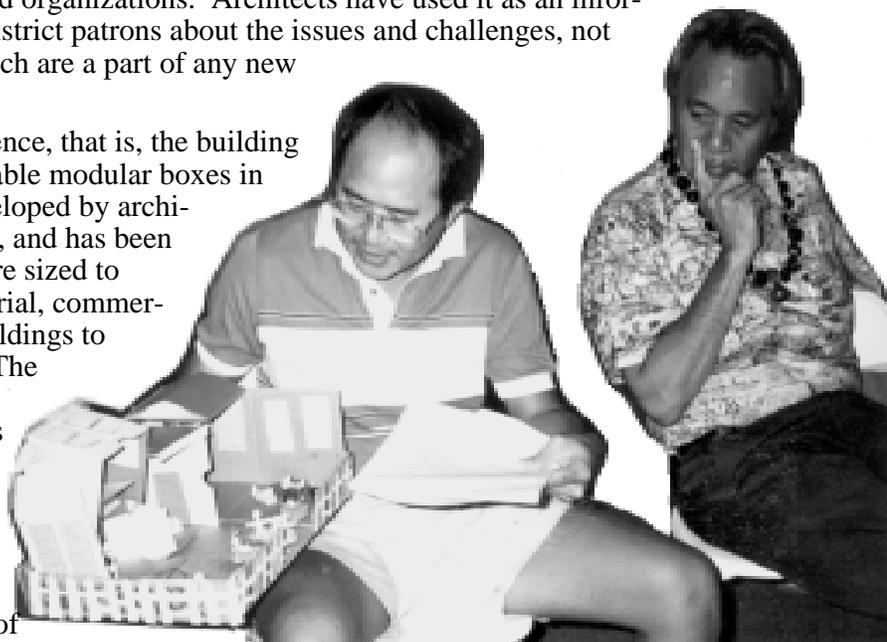
Currently, a business teacher is using this method to help business students develop shopping center plans; a college professor is using it to explore spaces between buildings; and a fourth grade teacher is using it as a unit accompanying a city social studies emphasis.

Interdisciplinary Experience

The CUBE educators took a look at what kids are learning about in schools, and put it into a cohesive whole. Since it is community-referenced, student interest is high. **Box City** incorporates all curriculum areas: history, geography, art, politics, city planning, economics, social studies. **Box City** develops skills, in group cooperation, writing, art, mathematics, and spatial relationships. **Box City** develops an understanding of the development of cities, their present problems and successes and the need for future planning. **Box City** offers an opportunity for students of all learning styles to participate successfully in a classroom venture, and perhaps a neighborhood service project. **Box City** is experiential and exercises all thinking skill levels in Bloom’s Taxonomy.

Time allotment

The **Box City** curriculum guide suggests ways for a teacher to work with students prior to an architect or city planner’s visit. Students may prepare boxes in art class time or students can take a box home as an “at home” project. The educator or group leader works out plan for the city or helps



Evaluate the Environment: Joe Tassill examines the siting and plan of Steve Yim’s community center, Honolulu.

What Is Box City?



student committee to devise plan. Students spend one hour placing buildings or the “building of the city” can be combined with a visit from an architect or city planner. Total class time: 2-4 hours minimum, depending upon structuring of experience. (1. Decoration of Box 2. Grid plan 3. Placement of city 4. Architect or planner’s visit.)

Many teachers expand the unit into a semester-long or yearlong project. **Box City** is also popular at festival events as an introduction to built environment education concepts.

This project works well when an art teacher and a social studies teacher cooperate on the unit. However, it can be run independently by an individual teacher in any curriculum area. If no professional is available (architect or city planner), this resource contains all necessary information.

Participants make the following comments after **Box City** workshops:

“I like the immediacy of this process. Within 45 minutes we had ‘bought in’ to accepting responsibility for the city.” Educator.

“I’m going right back to do this with my architecture students.” College professor.

“I want to do this at my child’s school.” Parent.

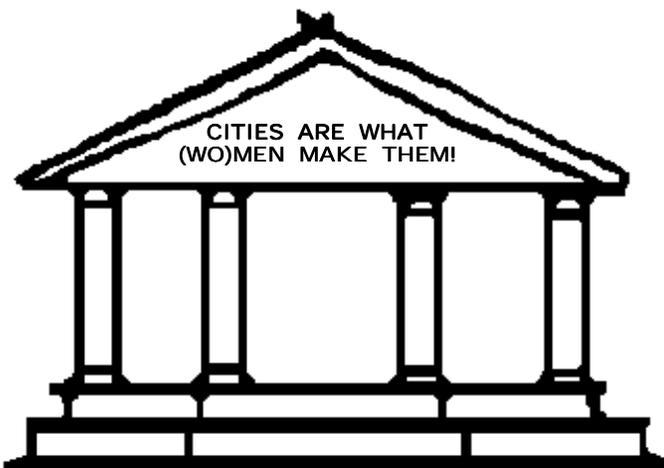
“We would like to try this process with the people who plan our theme parks.” Disney Imagineering.

“This is great activity for my child’s Scout Troop.” Parent.

“My students will want to do this all year long.” Educator.

At CUBE, we strive to provide curriculum ideas **plus** support assistance. Please call with your questions and, if you like, we will link you with other educators or organizations who have successfully created their own **Box Cities**.

We know you will enjoy and be challenged by your **Box City** experience and remember...



Adapted quote from the modern plasticized sign affixed to the classic stone City Hall Building, Larned, Kansas

Resource Peter Barricelli, 55 Boutelle Ave., Waterville, ME 04901



Box City...a program review

By Ginny Graves, Director, CUBE

CUBE has been making cities out of boxes for over a third of a century! What have we learned? What has changed? What has remained the same?

The first Box City occurred in 1969 as a joint programming effort of Discovery Series, an interrelated arts program at the Johnson County Libraries, and the American Institute of Architects/Kansas City. It had a lot to do with “decorating” the boxes and identifying architectural detail—little of it in 1969 on the “real” buildings of the International Style prevalent at that time. Through the years, the Box City activity, like the communities it represents, has evolved, grown, and seen many changes.

Through 1990, Box City concentrated on helping participants understand the current codes and zoning regulations and constructing “cities” which conform to those codes. In 1990, as our real cities began to tear down, redo, and rethink the actions of the 70s and 80s, the Box City process became one of questioning—mostly, how can we do it better?

The process of the Box Cities of the late 90s and early “Twos” is concerned with city planning and tends to focus on themes: understanding neo-traditional town planning; the need for consensus, the green movement and sustainable development; tools for political activism; the economy of cities and social responsibility issues such as affordable housing and universal access.

What have we learned?

That the Box City process is still a workable teaching tool, whether for adults or kids.

What have we learned?

That Box City participants will replicate what they know, unless they are exposed to a different way of doing things.

What have we learned?

How much we don’t know—both as citizen participants and as professionals involved in trying to make communities better.

What have we learned?

That the Box City process works as well with adults as with younger people. Many types of organizations are using it to train volunteer preservationists, new city planning commissioners, neighborhood alliance coalitions.

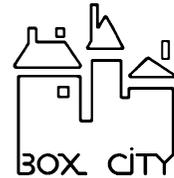
What have we learned?

That this activity—chaotic, messy, frustrating, never-ending—is much like our cities, and as such, is one of the best training grounds we can provide to help people—youth or adults—understand their roles in the evolution of the city.

In the Future...

In CUBE’s publication called **Community Connections: 10 Things You Can Do!** are additional ideas that you have shared with us—some of the extensions, variations and multiple ways that community-based education can bring institutions and communities together.

Box City...a curriculum review



By Caryn S. Canfield, preservation activist in Albany, New York

Box City is an innovative educational program designed to teach children of all ages (and adults) about the styles and structure of architecture, the concepts of community planning, and most importantly, the value of being a responsible citizen.

The Box City activity was developed in 1969 by Ginny Graves, an infectiousy impassioned Kansas City art educator, and her equally dedicated and enthusiastic husband, architect Dean Graves. Both are involved in preservation efforts as well. The programs are continually evaluated, revised and refined through cooperation and assistance of educators, architects, planners, preservationists, historians and other community leaders.

What does Box City do?

Box City provides a hands-on experiential approach to community planning and design principles; it instills understanding of the development of communities and their present problems and successes. The curriculum allows students to make their own buildings (from cardboard boxes) and then to create their own communities by placing the boxes on a base plan, at the same time learning how geography, economics, ecology, history and cultures have affected the development of the community.

The participants create a community the way real communities get built, through a mix of collaboration, regulation, necessity and entrepreneurship. When the community is built, the participants evaluate it and compare its good and bad features with the community where they live.

The program aids students in better comprehending the built environment —why it is important to them personally and how they can influence and help to shape it. One technique is conducting a mock town meeting, with students assuming the roles of developers, government officials, neighborhood board activists, environmentalists and others with a stake in decisions.

Box City progresses through a community planning process, teaching vocabulary and the complexities of planning decisions. A main objective of the exercise is to raise the awareness of people who feel helpless about what's happening around them and to show them how they can be a part of the process. The culmination is a commitment to rebuild a sense of community, and to build communities that are designed to meet the needs of people.

Box City allows participants to think about their own city, to dream about what it could be, and teaches them to take responsibility for their actions and decisions.

Box City and its companion resource, **Walk Around the Block**, are especially appealing in an educational setting because they are interdisciplinary, multicultural, and involve complex thinking. The programs teach group cooperation in decision making, actively encourage service to the community, and offer an opportunity for students of all learning styles to successfully participate. Box City and Walk Around the Block exercise all thinking skill levels in Bloom's taxonomy, address multiple intelligences and align with national standards and the Iowa Test of Basic Skills. The activities demonstrate the need for preservation ethics and future planning.



Box City...an evaluator's review

By Dr. Kathryn Loncar, School of Education, University of Missouri Kansas City

Delivering Our Curriculum Through Built Environment Education

Built environment education is an important part of a balanced, and comprehensive elementary school curriculum. The programs and activities for built environment education which have been designed and promoted by **CUBE** are well constructed curriculum units which can easily be incorporated into the existing curriculum of our elementary schools. These activities allow us to bring into our classrooms valuable knowledge about the man-made environment and its affect on human events and history, as well as its affect on and the relation to the natural environment. For our children who must live and work in a modern industrialized society, this knowledge is critical if they are to be thoughtful and active citizens. The value of this knowledge for our students, delivered through **CUBE's** activities and programs, is alone sufficient reason to bring these activities into our elementary classrooms. Happily however, there are other educational benefits that these programs can deliver.

Integrating Box City into Curriculum

When we consider incorporating into our already full curriculum, programs such as built environment education, we are necessarily concerned with the time it takes and the impact it has on the delivery of our existing curriculum. Our elementary curriculums consist not only of knowledge, but also of many skills. We, as classroom teachers, are held accountable in many ways, often through the use of standardized tests, for the delivery of this knowledge and these skills to our students. That is why, no matter how valuable programs like built environment education may seem, we teachers understandably must say to ourselves, "This is a good program, but if it's one more thing on top of everything else I have to do, I just can't afford to include it."

That is a very justifiable response, and that is why it is so important to explore the usefulness of these built environment education programs beyond the valuable knowledge they provide. These programs also teach many of the practical skills we must develop in children. These programs for built environment education are not additions to our curriculum, they are our curriculum. They provide a vehicle, a thematically unified way of delivering the content and the skills of our existing curriculum.

This rich alignment of our curriculum, and the content and skills included in built-environment education programs can be demonstrated. Let us take a program like Box City and see how it aligns with the Iowa Test of Basic Skills (ITBS), which is one of the most frequently used measures of how well we have conveyed to our students the knowledge and skills that constitute our elementary curricula. Here are some of the skills drawn from Level 8 (grade 2) of the ITBS.

Test W-1: Visual Materials

- * Identifies a location from directional clues on an illustrated map
- * Recognizes the directional relationship of two locations on an illustrated map
- * Identified density on an illustrated map

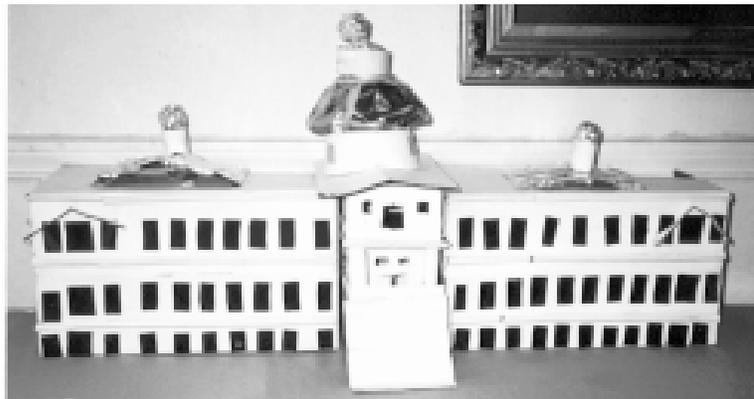


Photo Credit: Linda Dixon & Kathy Keck, Alta Vista Elementary, Cheyenne, WY

An evaluator's review



Test M-1 Mathematics Concepts

- * Estimates length
- * Selects a given geometric shape
- * Answers a question based on the ordinal position of an object

Test - Social Studies

- * Selects an example of a city service
- * Demonstrates ability to interpret a map
- * Recognizes the relation between geography and food production
- * Distinguishes between needs, goods, and services
- * Identifies cooperative behavior within a community

Test - Science

- * Understands the principle of balance
- * Identifies a weather condition associated with given safety precautions
- * Identifies a harmful effect on man and the environment
- * Identifies objects which can be classified together
- * Recognizes physical features of the earth's surface

If we consider for a moment the activities of **Box City** alone, it becomes obvious how these skills are inherent in the activities. These are just a very few of the specific skills that the test covers which can be learned through **Box City** activities. A full examination of Level 8 of the ITBS revealed at least 54 individual skills that could be delivered to elementary students through **Box City**. Strong alignment of the activities and the skills at any level of the ITBS can be found. A curriculum alignment chart accompanies the **Walk around the Block** curriculum, materials with even broader scope than **Box City**.

Box City, Walk around the Block, and the other built environment education programs that CUBE offers can readily be incorporated into the elementary core subjects because they provide much of the knowledge and many of the skills that are a part of our **existing** curricula. We can give our students the benefit of the relevant and interactive learning, and the knowledge and skills which these programs provide, without taking any time away from our regular curriculum. Knowing this, a classroom teacher can honestly say, "I can't afford **not** to bring built environment education into my classroom."



Box City...an interdisciplinary review

By Bobbi Sharbutt, Elementary Art Teacher, Shawano School, Shawnee Mission School District

Box City is an urban planning activity which was started in Kansas City in 1969 by area architects and educators to help develop an understanding of the built environment and its implications for students. It has been used in schools from the elementary to college level and in museum education. Box City has also been used in architectural education classes for teachers and presented at the 1987 and 1990 National Art Education Association conventions. As well as at national and local conferences of many disciplines. In the Box City project, students are given boxes to alter and decorate to represent a particular type of building: residential, industrial, commercial or public. Box sizes vary according to the particular building selected. Modular boxes are available commercially from CUBE, or students can bring cereal and shoe boxes from home. Since a variety of buildings are needed for a representative city, it is helpful to have a sign-up sheet or assign students to create a definite building type.

Box City may be an art classroom activity, but really works best if it is developed as a unit of study on the urban environment, lending itself to many social studies curriculum units and giving teachers a chance to team-teach a unit on the development and makeup of a city as well as what makes an esthetically pleasing environment. The aesthetics of architecture can be an important part of the discipline-based curriculum, teaching students to appreciate architecture as an important element of the environment. With this type of teaching in mind, students may be learning about urban planning and environment in one class, while creating their buildings in an art class. Students use many types of materials to create their buildings depending on their level of ability. Cut paper seems to be universally utilized as a material for roofs and chimneys. Other elements may be added to the basic box shape. Older students can research building styles and add actual architectural details from recognizable styles.

As a culminating activity, it is important to create an actual urban environment using the buildings that the students have made. A large surface is laid out with a street grid and the buildings are placed along the streets to approximate a city. This can be done as a group activity, with students gathered around and discussing the placement of the various buildings to make the city. Appointing a group to be city planners can help students understand the implications of zoning and planned development in city growth. The planners can approve or deny the placement of buildings, with the teacher acting as a facilitator to keep discussion going. When the buildings are all in place, students compare their constructed town with their own city or neighborhood and can add, at least conversationally, those buildings which are essential to a city, but missing from this one.

I have used Box City in classrooms from fourth grade up to adults and feel Box City is a valuable experience which will help students understand more about their built environment.