

## **Houston Architecture: A Collaborative Unit between the Librarian and Classroom Teacher**

*Millicent Williams*

### **INTRODUCTION**

“Come walk along with me, the best is yet to see” is what the architecture of Houston seems to say to me. And when the classroom teacher combines his/her lesson plans with the librarian’s, that same phrase will be echoed by the students. Yes, collaboration between the librarian and fourth grade teacher will combine the Houston Independent School District Project CLEAR objectives by interfacing the benchmarks set in each rubric. It is this essence of architecture appreciation that will be demonstrated in this presentation.

Now, to fully understand how this will work out, one has to look at the objectives in the Library Science field and then in the Social Studies field. The actual rubrics that apply to this presentation are copied from the Project CLEAR binders given to each teacher in HISD.

Viewing the type of students who will be part of this architecture appreciation within the Texas unit presented at HISD Bellfort Academy is one of the factors that affect whether or not this attempt is valid. The resources in the library, the methods of teaching the unit by the classroom teacher and the technology available are also important factors in the advisability of this undertaking. Therefore, this presentation will view (1) the type of students, (2) the classroom teacher’s method of teaching, (3) the library resources, and (4) the technology resources as separate components of this presentation. Then, the actual integration of the librarian’s TEKS with the classroom teacher’s TEKS will be discussed and assimilated into the “Houston Architecture” unit within the “Texas –Social Studies” unit. This combination or method of integrating one set of TEKS rubrics into another set of rubrics is know as collaboration by librarians in HISD.

### **Students**

Bellfort Academy is a fourth-fifth grade school which is the upper elementary half of Lewis Elementary School (kindergarten through third grades). There are 298 fourth and fifth grade students at Bellfort Academy. The student profile (HISD website) describes the students as 34 percent African American, 65 percent Hispanic, and 1 percent Asian. From the visual perspective, they all have the same needs, regardless of their ethnicity. Their socio-economic profile reflects their 100% Title 1 status; so there are many programs and services this school qualifies for and gets special assistance from to encourage student/parent participation. On the same note, the profile states 95 percent of the students are on “free/reduced lunch.” With the statistics just stated on the students at Bellfort Academy, it is easy to surmise many norms that exist in middle class homes

“income-wise” are lacking in Bellfort students’ daily lives. The profile also reflects that 63 percent of the students are “at risk” – meaning they need additional encouragement to stay in school; they are likely candidates for “drop-out” status. Therefore, the need for immediate gratification is expected and added into the equation of reaching these students throughout all assignments and activities. The students are thereby entertained as they are educated and shown how all aspects of their education will make them “winners” throughout their life – not just while they are at Bellfort Academy.

### **Classroom Teachers (Method)**

There are seven fourth-grade teachers at Bellfort Academy. The bilingual teacher uses a self-contained method of teaching while the other classroom teachers rotate their classes in four specific sections: language/reading, math, social studies/geography, and science. Each one of these classes meets 45 minutes daily with the exception of the science class, which is taught as an ancillary class once a week. In addition to the rotated core classes, a team of ancillary teachers provides planning time for the classroom teachers in 60-minute increments each day. The ancillary classes are provided by the librarian in the library; the physical education teacher in the multi-purpose room and outside; the computer technology teacher in the computer lab and the science teacher in the science lab. Each teacher uses Project CLEAR rubrics provided by HISD as defined by the perspective subject field. Sometimes all the fourth grade teachers and the ancillary teach the same theme for example when the students go on a field trip or when there is a specific event like Hispanic Heritage Month or Black History Month. Other than those instances, all units are taught at the discretion of the TAAS/TEKS calendar, which Bellfort Academy adheres to per the department chairman of the fourth and fifth grade teams.

### **Learning Resource Center (Library)**

The Learning Resource Center (library) at Bellfort Academy is facilitated by a librarian. The librarian provides a curriculum of orientation during the first nine weeks, research skills during the second nine weeks, special topics during the third nine weeks and literature appreciation during the fourth nine weeks. During the first nine weeks, she hosts a weeklong book fair and family night for the parents and community partners to enjoy the fair in the evening. The fourth nine weeks, she hosts a second weeklong book fair and family/community partner night. Then, the last three weeks of school she encourages the students to campout in the library and enjoy books, board games, view master presentations and online author interaction. This campout experience is a nationwide program known as the READIN (<http://www.readin.org>). At the conclusion of this unit, all books are due and the librarian collects, shelves and inventories all the books prior to closing the library for the school year.

## **Technology Center (Computer Lab)**

The Technology Center at Bellfort Academy is facilitated by a classroom teacher who teaches keyboarding throughout the school year. The keyboarding method she uses is from the program called “Professor AWAFE.” In addition to the keyboarding exercises, the technology teacher also introduces the students to various software packages, as well as several academic evaluative tools like Heartbeeps and Star, as time permits. Each student is given a folder and monitor sheet for their typing speed exercises and special assignments as directed by the technology teacher. The computer lab is rectangular with the 25 computers around the perimeter of the room.

## **COMMUNITY RESOURCE (LIBRARY SCIENCE)**

The architecture of Houston is very much like a game of monopoly – the community resources that are afforded each have a lifetime of learning to offer. It is this offering of the architecture styles, features, materials and forms that are emphasized to the students in this unit. While the student is conscious of the buildings, the actual usefulness and aesthetics may be sidestepped; therefore the attitude for learning has to be established to really get the fourth graders moving.

This attitude should be: “*Veni, Vidi, Vici.*” I came, I saw, I conquered. That should be the expression the student uses as he boards an ocean liner (architecture appreciation unit), and crosses the ocean (architecture vocabulary and learning activities) to the other side of the world (field trips and final project). That should also be the feeling the student uses as he traverses life, learning as he experiences the wonderful advantages and disadvantages of letting his mind rove the planet to utilize it as the backboard of knowledge. As the student learns the game of checkers (one type of building style in Houston), then, discovers that the game of chess (several features in one architectural landmark) is more intriguing and challenging and finally graduates to monopoly (many more architectural techniques simultaneously in sync within the community resource) where he will not only have the thrill of moving from square to square, but also of discovering retail, commerce and ownership as parts of the game of life. Community resources are a lot like monopoly. Life, no matter how the student looks at it, is a “learn as you go” process. It does not all come at the same time.

## **TOURS**

This unit will explore community resources as a venue for an entire lifetime of learning. Five sectors of the community will be covered:

1. *The library:* In Houston there are two central libraries on the same plot of land and 35 branches. When we visit the library, I would like the students to see the two main libraries as a complementary set of buildings – each for the purpose of

using books, but one for Texas history research and the other for general public use of current knowledge on all subjects.

2. *The museum:* In Houston they are numerous. We will concern ourselves with the Museum of Fine Arts Houston. The term “window” will be the focus of this tour as we look at the types of windows on the original building (Caroline Wiess Law Building) and then look at the “windows” from the opposite side of the street through the loggia of the new Beck Building. We will notice that the loggia provides “windows” which frame the original Law MFAH building across the street.
3. *The university:* Again, in Houston there are several. For this purpose we will focus on Rice University. The term “loggia” is very vividly seen at Rice University. All around the interior buildings that form the perimeter for the courtyard are “loggia.”
4. *The neighborhood:* Since there are a lot of neighborhoods, we will limit ourselves to Broadacres. The framing of a neighborhood with oak trees is phenomenal – it seems like you are viewing a framed neighborhood.
5. *Downtown:* The use of sculptures with the skyscrapers is one that you can even walk to interact with will be the focus. We will look at the Louisiana Building and the sculpture large enough for 12 people to comfortably walk around inside - “Monument au Fantome.”

My task (pleasure) will be to show fourth grade students how learning about Houston architecture in the geographical areas stated above can be shared with others just like the monopoly game which can be called a “lifetime of learning.”

This sharing will be in the form of a brochure. Now, in order for us to get to that point, the students will be introduced to the “Big Six” instructional unit. They will be asked to define (in their own words) what the outcome of this unit should be. And, by using various information seeking strategies, they will locate many tools that will lead to the use of information for this project which can be synthesized into a palatable tool to be used for their brochure. In order for them to define how their brochure will look, architecture words will be presented to them each week on the blackboard with an associated project.

In the first week, they will be introduced to words associated with structures or landmarks and directed to make a timeline of when each of these architectural structures first appeared. Those words will be pyramid, temple, amphitheater, castle and skyscraper. After looking those words up in the dictionaries in the center of each table and recording the definitions in their library journal, the students will be directed to access an encyclopedia in online database – Research Explorer (REX). After using the terms as

keywords, the students will cut and paste examples of the structures in an online journal for their semester folder. Then, they will make the timeline on construction paper (provided by the librarian) with illustrations of each structure at the appropriate place in the timeline.

In the second week, they will be introduced to words associated with architecture features and directed to make a pictogram of each using the software program entitled “Kidpix.” Those words will be column, dome, arch, loggia and window. Again, students will use the dictionaries in the center of the table to practice their “guideword” skills as they look up and copy the definitions of these words into their library journal. Then, they will use the computer to access the Gale databases (Texas Library Connection) to learn more about these terms, copy and paste the examples of the features in their online journal and proceed to the project of making a pictogram of each feature.

Finally, in the third week, they will be introduced to words associated with architecture materials and directed to match landmarks with those materials from discarded magazines. Those words will be stone, brick, marble, timber and concrete. Accessing the dictionaries in the center of the table will be second nature by this time as they look up and copy the definitions of these words into their library journal. Going to the computer to use the Alexander electronic catalog for books available in the library will begin their bibliographic citation side of this project as they copy and paste book citations in their online journal file. Then, it will be off to the discarded magazines to identify landmarks that are made of those materials.

Utilizing the three online databases systems in three different sets of architecture word groups will provide the familiarity students need in order to see the format differences in their research tools provided by HISD. It will also provide them with the ability to locate materials on their own in various formats. And, in conjunction with those skills will come the synthesis of ideas for their brochure. Coincidentally, this method of seeing a need, collecting information, and making a project of each set of terms is the purpose of the “Big Six” research technique. Thus, the students will not only initiate a new approach to architecture appreciation, but they will also initiate a new research tool which will serve as a backdrop for the way their storyboard will uncover as they make their brochure to share the information they have learned with others.

Armed with the research techniques exercised in library class, will prepare the students for field trips to follow – whether the student is taken by their school librarian in a group tour or by their parents, they will be able to discern several architectural nuances they were unaware of before completing the three week architecture appreciation unit.

Several of the Learning Resource Center (Library Class) HISD objectives are utilized throughout this Houston Architecture presentation to fourth graders as illustrated in the following Project CLEAR rubric:

HISD Benchmarks for Libraries – Grade 4	Texas Essential Knowledge Skills	TAAS Target & Alignment Database Code
4.4.A: The student will explore the public libraries, university libraries, museums and community resources in school assignments.	8C: The student will be able to identify words that name persons, places, or things and words that name actions.	R.4.1. The student will determine the meaning of words in a variety of written texts.
4.9.B: The student will demonstrate the correlation between the classroom reading program and library experiences.	10B: The student establishes and adjusts purposes for reading such as reading to find out, to understand, to interpret, to enjoy, and to solve problems.	R.3.5 The student will analyze information in a variety of written texts in order to made inferences and generalizations.
4.9.C: The student will use online databases and electronic catalogs in the LMC.	13C: The student uses multiple sources, including electronic texts, experts, and print resources, to locate information relevant to research questions.	R.4.5 The student will analyze information in a variety of written texts in order to make inferences and generalizations.
4.14.C: The student develops skills in gathering, analyzing, interpreting, organizing, and evaluating information. (The Big Six)	13F: The student produces research projects and reports in effective formats, using visuals to support meaning, as appropriate.	R.4.5 The student will analyze information in a variety of written texts in order to make inferences and generalizations.

### **TEXAS LANDMARKS (SOCIAL STUDIES)**

According to the HISD objectives for Project CLEAR “students examine the history of Texas from the early beginnings to the present within the context of influences of the Western Hemisphere. Students identify the contributions of people of various racial, ethnic, and religious groups to Texas and describe the impact of science and technology on life in the state. Students use critical-thinking skills to identify cause-and-effect relationships, compare and contrast, and make generalizations and predictions.” This objective clearly points to the contributions of people of all kinds in the state of Texas. Therefore, architecture as a contribution is one of the cornerstones of education for the fourth graders to understand and put into their “well” of thinking, their “enjoyable” experiences of learning, their “kitty” of research projects they completed with pride and understanding. It is with this attitude of learning, that the students will approach the architecture aspect of this Texas social studies unit at Belfort Academy.

The following rubric (copied from Project CLEAR) recapitulates the objectives utilized for this presentation:

HISD Social Studies, Introduction – Grade 4	Texas Essential Knowledge Skills
(4.17) The student understands important customs symbols, and celebrations of Texas.	(A) The student is expected to explain the meaning of selected patriotic symbols and landmarks of Texas, including the six flags over Texas, San Jose Mission, and the San Jacinto Monument.
(4.22) The student applies critical-thinking skills to organize and use information acquired from a variety of sources including electronic technology.	(B) The student is expected to analyze information by sequencing, categorizing, identifying cause-and-effect relationships, comparing, contrasting, finding the main idea, summarizing, making generalizations and predictions, and drawing inferences and conclusions.

### **Collaboration between Librarians and Teachers**

Attitude, a way of looking at the material to be learned by the student and the way of looking at the method to be selected by the teachers, is the chief factor in this “Houston Architecture Appreciation” presentation. When the librarian and the social studies teacher team together, collate their resources, mesh their learning objectives on the same “story board” and move forward for the “betterment of the students,” everyone wins. Not only do the students have the benefit of using technology and research skills within the confines of a classroom assignment, but also the teachers (librarian, technology teacher and classroom teacher) have the benefit of knowing their efforts are contributing to the “total” lifetime of learning experiences. This blending of styles, techniques, and HISD rubrics is known as collaboration. The *Merriam-Webster Dictionary* defines collaboration as “to work jointly with others.” This is the attitude fostered and hoped for in this presentation.

### **Integrated Project Using Metro Buses and City Sites**

This fourth grade level class was conceived as a vehicle to integrate research skills while using architecture vocabulary words. In addition to teaching research skills, it was conceived to integrate the exploration of community resources by actually taking the students to these sites via the Metro bus.

Eight walking tours of different sections of Houston by teachers after school every Tuesday was very educational for this librarian because it provided a chance to exercise “walk for one hour” while listening to the seminar leader expand the group’s knowledge of Houston by providing a brief explanation of historical sites and then ask them what they thought of the landmark at the site. Sometimes the teachers in the group answered by

comparing the structure to another one on a previous tour and sometimes they answered by stating what they knew of the architect.

As I listened to the comments and followed the group, I thought about ways my students would absorb this knowledge. How could they profit from a similar architecture unit? I thought of the Metro system as a way of getting to the sites. Then, I thought of what the students would need to know in order to come away with more knowledge than when they started the unit. At that time, I put together a basic vocabulary consisting of the way a building appeared, the elements that were used to make the building, and the materials the buildings were made of. After I got those three vocabulary lists of five architecture words per group together, I began to think of how the students could access those terms and in what context. As I perused Project CLEAR, it all became very apparent. First, I would give them one of those lists at a time – that would gradually increase their vocabulary of architecture words – using HIDS’s own online research tool, RexExplorer. Then, I would require that they use the RexExplorer link from Bellfort Academy’s website as their access point to find the meaning and illustrations of those words. Then, I would require that they transfer that information to their notebook. Finally, by using the “Big Six” research format they would organize that information in a way that would help them with their other assignments.

Now, the method used by the seminar leader was different than mine. He gave us articles to read about the buildings and architects before we visited the site. That was okay because as adults we already had the vocabulary to go with the structures at the sites. However, with my fourth grade students, many of them probably have never had basic architecture vocabulary labeled. And, many of them have not had the opportunity to research those terms using the Internet. Many classroom teachers still depend on paper copies of dictionaries and encyclopedias. So, the method for making all this happen gradually developed in my head until I finally wrote it down while looking at the library learning objectives outlined in the Project CLEAR rubric provided by HIDS.

Here is a scenario of one of our community resource visits. After the students arrive from Bellfort Academy (via Metro #73 and Metro #8) at the Museum of Fine Arts they will observe the original backcourt of the Law building. They will talk about the type of building it resembles the most (taken from the first list of five words they have researched). They will discuss the architecture features used to design it (taken from their second list of five words). And, finally, they will discuss the materials used to make this museum (taken from their third list of five words). Next, the students will walk over to the Beck building and discuss, using their three lists, how that museum’s design fits the structure list, what features were used in design and what materials were used. Going over the three lists of five words will reinforce the student’s knowledge gained in library class while improving their research skills. Therefore, I will listen to their discussions and guide them through their architecture vocabulary in the discussion. Afterwards, I will point out the “window-effect” of the loggia as one looks through the Beck Building at the Law Building. This framing of one building by another was shown to me by our seminar



leader when I was on a similar tour with the teachers. To blend in the social studies collaborative teamwork, we will go over to the Cancer Survivors Plaza, adjacent to the Warwick Hotel, and size up the two monuments there noting their landmark structure, features and material from our three vocabulary lists. The two monuments there are the Sam Houston Statue in Hermann Park and the rotunda temple memorial to cancer survivors. Again, students will use their three vocabulary lists to discuss the monuments. In social studies, during the Texas history discussion, the visualization, first hand, will be a bonus to their placement of when and where they actually saw those Texas landmarks.

The purpose of focusing on only four of the library benchmarks is to be sure this unit is covered thoroughly in a manner that can be meaningful to the students after this Houston community resource unit is finished. As one looks at the library benchmarks, after completing the unit, it is clear the students actually had the ability to learn about the architecture of community resources such as the library and museum in a different light than just “let’s go inside.” Students were able to correlate the reading material presented in library class with materials presented in their social studies class when they study the history of Texas. And, students were able to use online database sources to get information about architecture. Using those databases will correlate that knowledge with future assignments in other classes. Using the “Big Six” research format will help the student develop skills in gathering, analyzing, interpreting, organizing and evaluating information. And certainly, being able to see, first hand, on a field trip how the vocabulary words are used by an architect by taking a tour of the facility gives the learning experience a multimedia edge that will connect to more than just one view of the learning process.

The actual lesson plans shown in this unit will illustrate how the HISD rubric works from the librarian’s perspective (community resources). The librarian’s lesson plans taught in the social study teacher’s class when Houston landmarks is the topic of the Texas history unit brought to the library to be researched, then taken to the technology lab teacher’s class to actually do the graphics side of the project.

## **LESSON ONE: LANDMARK, STRUCTURE TIMELINE**

As a preparatory for the unit, students will learn architecture vocabulary words relating to landmarks. They will demonstrate their understanding of “when” in time the structure was built by drawing a timeline at the bottom of their paper after recording the meanings of the words. To help them with this assignment they will utilize RexExplorer, HISD online database program, provided as a link within the library web page designed by the librarian at the Bellfort Academy website (<http://es.houstonisd.org/BellfortAcademyES>).

1. Pyramid
2. Temple
3. Amphitheater

4. Castle
5. Skyscraper

## **LESSON TWO: FEATURES USING PICTOGRAMS**

To encourage the students to look at landmarks and structures with a more acute look than “oh, isn’t that a pretty site” they will further enhance their vocabulary with features and styles used in architecture. They will demonstrate their understanding of “how” the features affected the landmark or structure by making pictograms (drawings or using clip art from KidPix, a software product used in the computer lab), after they looked up the words and recorded their meaning using RexExplorer.

1. Column
2. Dome
3. Arch
4. Loggia
5. Window

## **LESSON THREE: MATERIALS AND LANDMARKS**

To help students understand not all landmarks or structures were built with the same technologies or materials, the last project will include a cut and paste exercise. After looking up the vocabulary words for this lesson, the students will peruse old magazines and RexExplorer to “cut and paste” illustrations of architectural landmarks using the materials listed below.

1. Stone
2. Brick
3. Marble
4. Timber
5. Concrete

## **LESSON FOUR: BROCHURES**

Finally, the students will take field trips with either their classroom teacher or their parents to some of the community resources in Houston. This experience of seeing some of the landmarks in Houston through the eyes of newly added architecture vocabulary words and projects associated with the words will reinforce the learning process. As part of a field trip, the students will be able to share the wealth of knowledge they gained throughout the unit as a class; as part of a parent activity, the family will be able to enjoy “quality time” participating in a school-related activity. Then, to share this experience with others and initiate their research skills unit in the library, the students will design a brochure using the “Big Six” technique demonstrated by the librarian. This same research

strategy can also be used by the classroom teacher as she presents the architecture of Texas landmarks in her collaborative portion of this unit.

To assist both the classroom teacher and the parent, a list of the places and bus routes where the architecture can be enjoyed is listed below. (All buses that originate from downtown Houston, Bellfort Academy and the neighborhood houses or apartments where the students live are located on bus route #73, which leads to downtown via the medical center.)

- Library (Bus Route #2, 4, 8)
- Museum (Bus Route #2, 4, 8, 34)
- University (Bus Route #34 St. Thomas; #30 U. Houston; #2 Rice)
- Neighborhood (Bus Route #50 6<sup>th</sup> Ward; #82 Courtlandt)
- Downtown (Bus Route #2, 4, 8)

## **RESOURCES**

- Houston Monopoly game - Barnes/Noble book store
- Websites (<http://es.houstonisd.org/BellfortES>) –RexExplorer online database
- Metro – Houston bus system
- Appendix (HISD lesson plans, Big Six worksheet, RexExplorer page, excerpts from the online encyclopedia web pages, UH Library Catalog citations)

## **INSTRUCTIONAL MATERIALS**

- Books (see Bibliography)
- Magazines (old ones to be part of “cut and paste” project)
- Software (Clip art and KidPix)
- Poster board
- Notebook paper, color pencils, crayons
- Laminator
- Computers

## ANNOTATED BIBLIOGRAPHY

### Teacher Resources

Foulk, Karen. *147 Fun Things to Do in Houston*. Sugar Land, Texas: Into Fun, Inc., 1997.

This presentation is an informal introduction to the city of Houston and surroundings. There are no photographs to accompany each brief description of the location; however there days and times each place is available for viewing, and the cost/fee for admission is included as well.

Fox, Stephen. *Houston Architectural Guide*. Houston: American Institute of Architects, Houston Chapter and Herring Press, 1999.

An amazing book of 986 locations in Houston preceded by 20 maps of each tour grouping. The photographs of the places are very keen in angle and focus. The annotations following each photo not only give the history of the site, but also the date and architect responsible for the structure.

French, Hilary. *Architecture – A Crash Course*. New York: Watson-Guption Publications, 1998.

“This book is a guided tour around the world’s architectural heritage. This book tells you how styles developed, why architects do the things they do, and how the designers of the present learn (or often don’t) the lessons of the past.”

Howarth, Eva. *Crash Course in Architecture*. New York: Barnes & Noble Books, 1998.

“Here is a survey of Western Architecture from the beginning in Classical Greece through Art Deco...chronologically arranged to lead you naturally through twenty centuries of experience and techniques, each period has its story to relate, including an historical time chart to put everything in perspective.”

### Student Resources

Doherty, Craig A. and Katherine M. Doherty. *Building America: The Houston Astrodome*. Connecticut: Blackbirch Press, Inc., 1997.

This book not only shows the student how the astrodome was built using color photographs; but also shows the student some of the problems having a “first ever” circular sports arena with a moving roof posed. Students interested in math would find it challenging to make a miniature model using the ideas proposed in this book.

Gardner, Robert. *Architecture*. New York: Twenty-First Century Books, 1994.

This book could serve as an overall introduction to community resources to open the student’s eyes to the possibility of learning on the spot without the aid of the classroom teacher telling him/her everything.

Lynch, Anne. *Great Buildings and Sydney*. Time-Life Books, 1996.

For students who want to enlarge their community resources base, who do not want to just see the skyscrapers and tunnel system for themselves, but also want to see the “big picture” of architecture, this is the book.

Severance, John B. *Skyscrapers: How America Grew Up*. New York: Holiday House, 2000.

Students fascinated with the undertakings of skyscrapers – their function and purpose – will find this book to their liking. Not only are the footings, basements, and vertical structuring explained, but also the positive challenges of this type of architecture portrayed.

Wood, Richard. *Architecture*. New York: Thomson Learning, 1995.

This book is a carry over from Robert Gardner’s book. It is always good to have more than one book on the same subject with the same perspective, but a different author.