

# **Southwest Architecture & Computer Aided Design CAD**

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**Philosophy:** This is a class in Architectural CAD Computer Aided Design for 9th through 12th graders. The class will focus on architecture in the Southwest so the students may visit and experience various types of architecture within their environment. The entire curriculum is based on problem solving and critical thinking activities. The class will last an entire school year. The unit presented in this endeavor is for a three week period during the school year. The activities are broken into 85 minute periods and so you may have to make adjustments for your own class schedules. The students will have had 5 weeks of manual drafting and CAD (computer aided drafting) before this unit is begun.

It is important that all the students have the opportunity to succeed in school; therefore, the class will be taught in all learning styles, incorporating the various multiple intelligences. The classroom is set up to experience all mediums. Enclosed with the lesson plans, please see the diagram (fig. 1) of the classroom setup, which gives the students a chance to solve problems, in a hands-on approach, related to "real world" experiences.

This course is designed to meet the needs of the students and future employers in order to prepare the students to become productive members of the workforce or to encourage higher educational endeavors.

**Special Considerations:** Due to the high rate of inclusion of all students in regular classes, the following statement addresses this consideration. All labs and classwork remain constant during the school year. It includes all of the following: maintaining contact with students' special education teachers and providing the individualized help required to each student, pairing students when reading or completing written work, allowing students to complete work in their native language, assigning work to be done with the aid of the LEP language equivalency programs materials or the aid of a special education teacher. Contact with students' parents or guardians will be made when necessary. Grading is with respect to each students' ability and his or her effort in project completion. In addition, maintaining a close contact with students' counselors, liaisons and parents is a priority, in order for the student to succeed.

**Standards and Benchmarks:** This curriculum is written with the intentions of meeting district, state, and school goals, standards and benchmarks for a CAD computer aided design program for first year students.

## **Curriculum Unit**

3 week unit on Southwest Architecture & Computer Aided Design CAD

## **Daily Lesson Plan Day 1**

**Topic** Presentation of Problem, Problem Solving Process, Group Cooperative Skills, Evaluation Procedures & Introduction to Southwest Architecture.

**Delivery** Lecture on Problem Solving Process, Application of Problem Solving Process to

Presented Problem. Presentation of Evaluation Criteria. Class taken outside to sketch school or neighborhood buildings. Assign small groups to work on problem. (3 to 4 students in a group)

## **Application**

### Steps in Problem Solving

1. Define or restate the problem.
2. Research the problem.
3. Propose possible solutions.
4. Pick the best solution.
5. Try the solution.
6. Evaluate the results.
7. If necessary return to step 3.

### Evaluation Criteria

1. Does the end result fulfill the problem criteria?
2. What problems were encountered in the problem solution?
3. How would you change the process or the solution?
4. How would you evaluate your participation in the problem solving process?
5. Does your model accurately reflect your written solution?
6. What overall grade would you give yourself on the project?
7. What overall grade would you give each member of your team?

## **PROBLEM**

You are new architects working for a firm in Albuquerque, NM. You have been transferred here from various parts of the United States and Canada. The architectural firm is going to place a bid on a contract for a new housing development on the west side of the city in the desert. The housing development is a new concept with a town square and authentic reproduction homes of the southwest containing styles from 1800 to 1900. All the homes plus commercial structures, churches and the government offices must be authentic reproductions of styles of buildings from that era in the southwest. Your group is to choose one type of house or building to complete as well as the landscape design of the town square. You must research home styles, commercial buildings, and governmental buildings between 1800 and 1900. The bid requires one blueprint of your structure and a landscape plan of the town square. The blueprint must be done in the CAD computer drafting program, and the town square landscape must be manually drafted. Upon completion of the project, a 5-minute presentation with appropriate architectural models must be made to the city officials. The completed project for presentation, including models, must be ready in three weeks.

Facts: The entire land space is 1000 acres. The town square may take up no more than 4 acres. An individual house may have no more than 1/2 acre. Each house, although a reproduction, must be environmentally advantageous, cost effective, able to accommodate at least four people of various ages and genders, and be xeriscaped.

**Materials** Handout with problem solving process and evaluation process. Handout with problem. Paper and pencils for sketching and note taking.

**Objectives** Students will be able to use the problem solving process within a small group. Students will be able to sketch an example of one style of southwestern architecture. Students will be able to make a chart containing the evaluation process.

**Closure** Students sharing sketches when returning to classroom. Small groups' restatement or definition of problem written on chalkboard.

**Assessment** Grade evaluation charts.

## **Daily Lesson Plan Day 2**

**Topic** Southwest Architecture History

**Delivery** Slide show presentation of Southwest homes. Video on Bandelier Nat'l Monument. Lecture and discussion on cultural influences on architecture in New Mexico.

**Lecture Content** Typical of early Native American settlements in New Mexico is the Taos Pueblo. "Still inhabited, though now modified, is the Taos Pueblo, Taos, New Mexico, begun before the sixteenth century but showing the traditional method of adobe construction. The pueblo consists of two clusters of houses, each built of sun-dried mud brick, with walls ranging from two feet thick at the bottom to about one foot thick at the top. Each year the walls are still refinished with a new coat of adobe plaster as part of a village ceremony. The rooms are stepped back so that the roofs of the lower units form terraces for those above. The units at ground level and some of those above are entered by doors that originally were quite small and low; access to the upper units is by ladders through holes in the roof. The living quarters are on the top and outside, while the rooms deep within the structure were used for storage of grain. The roofs are made of cedar logs, their ends protruding through the walls; on the logs are mats of branches on which are laid grasses covered with a thick layer of mud and a finishing coat of adobe plaster. It is a massive system of construction but one well suited to the rigors of the climate..."<sup>1</sup> Albuquerque's first settlers arrived on the banks of the Rio Grande and settled in 1705. The settlement was named Albuquerque after the Duke of Alburquerque in Spain. New Mexico was known as the New Spain. Hence the influence of Spanish Architecture in Old Town and much of the city today.

### **Housing and Architecture**

For shelter simple foragers generally used brush windcreens or small, portable tepees, tents, or wigwams of poles, bark, or hides. In the American Southwest multistory apartment houses in the form of pueblos made of stone, mud, and beams were made by the ANASAZI, possible ancestors of the Pueblo peoples. Temple and burial mounds were built widely in Nuclear America and in the Eastern Woodlands and the southwest of North America.

### **Spanish missions**

The history of Spain's missions in the American South and Southwest reveals much about Spain's strategy, contributions, and failures in these regions. The expedition of Juan de ONATE (1598) convinced Spanish authorities that no wealthy Indian empires like that of the Aztecs were to be found north of Mexico. Consequently the Spanish came to view the northern frontier of their empire as a defensive barrier and as a place where pagan souls might be saved. In what is now New Mexico missions, were founded to propagate Roman Catholicism. To protect these missions as well as the mines and ranches of Mexico from attack from the north, the Spanish

established presidios--fortified garrisons of troops.

The first missions in New Mexico were established by friars accompanying the Onate expedition of 1598; during the next 100 years Franciscan priests founded more than 40 additional missions, most of them along the Rio Grande. Especially influential was Father Alonso de Benavides, who directed the founding of 10 missions between 1625 and 1629 and thereafter promoted them ably in Spain. By 1680 missions had been established among most of the New Mexican Indians.

Missions varied enormously in their economic and religious success. Some could not support themselves; others developed fertile fields and vineyards and huge herds of cattle. Virtually all successful religious conversion was among sedentary Indians who were easier to control and more adaptable to agriculture and herding. The few attempts to convert such warlike nomads as the Apaches and Comanches failed dismally.

In seeking to introduce both Catholicism and European methods of agriculture, the missions encouraged the Indians to establish their settlements close by, where the priests could give them religious instruction and supervise their labor. Unfortunately this arrangement exposed the Indians to the Europeans' diseases, against which they had little immunity. An epidemic in New Mexico, for instance, killed 3,000 Indians in 1640. Critics charged also that the mission system destroyed much of the Indians' native culture and turned them into an exploited and degraded labor force. Indeed, there were sporadic rebellions; the most spectacular was led by an Indian named POPE in 1680; almost 400 Spaniards were killed, and the rest were temporarily driven from Santa Fe and northern New Mexico. After 1834 the Mexican government secularized most surviving missions, converting them for nonreligious use.

In design the missions reflected Gothic, Moorish, and Romanesque architectural styles--the various cultural influences brought by the Spanish. Paintings on interior walls sometimes depicted the Southwestern landscape and the artistic traditions of the Indians. Among the best surviving examples are Missions San Jose y San Miguel de Aguayo in San Antonio, Tex.; San Juan Capistrano, in the California town of the same name; and San Xavier del Bac near Tucson, Ariz.<sup>2</sup>

## HOUSE CONSTRUCTION TERMS

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"In terms of its basic construction, a house is composed of a FOUNDATION; the framing, or superstructure; an exterior skin; interior finishes; ELECTRICAL WIRING; HEATING SYSTEMS; and PLUMBING.

### The Foundation

The base of the foundation, the footing, must be sunk below the frost line--the depth to which the ground freezes--to insure that it will not be moved by prolonged frost. The foundation walls are usually made of poured concrete or concrete block, and waterproofed below ground level. If the surrounding soil is poorly drained, drainage tile is used to divert underground water away from the foundation. Anchor bolts are set into the top of the foundation wall and are used to anchor the wooden house frame to the foundation.

## Framing

In a conventional frame house, the frame--the skeleton that supports all the major elements of the house--is almost always of wood, usually of relatively small dimensions: 2 by 4 in., 2 by 8 in., or 2 by 12 in. in various lengths. The frame is fastened to the foundation walls by the anchor bolts; door and window frames, siding, roof covering, and flooring are fastened to the frame. Although framing nomenclature varies widely in different areas, it includes several universal terms for those framing members which are present in almost every house.

The sill plate is the wood plank that is anchored directly to the foundation wall and supports the exterior house wall. The roof plate anchors the roof rafters to the house frame.

Posts or corner studs are the main vertical supports of the frame.

Studs are smaller vertical members and provide support for exterior siding and interior paneling or wallboard.

Braces are diagonal members used to brace the studs.

Girders, or beams--often of steel--are horizontal members that carry the weight of the house.

Joists support the weight of the floor and ceiling.

Girts and plates are horizontal ties holding the frame together at the second floor level and on top of the studs at roof level.

Headers are members placed over a door or window opening. They are used to support the ends of studs that have been cut off to make the opening.

Rafters provide support for the roofing material.

Framing practices differ according to the type of house being built. Conventional eastern, or braced, framing is the oldest framing type and is characterized by the use of solid corner posts and studs that run the full height of the house from foundation to roof. In western, or platform, framing, each floor level acts as a platform for the posts and studs above it. Balloon-frame construction uses continuous foundation-to-roof studs; unlike eastern framing, however, it may not use diagonal stud braces but will rely for its lateral strength solely on its exterior sheathing. All three systems introduce short bracings, called fire-stops, that block the fluelike spaces between studs.

Floor framing consists of joists strengthened by short stiffening members, or bridging. Rough flooring, or subflooring, may be plywood or rough boards laid diagonally over the joists; the actual, or finish, floor--wood, vinyl, or tile--is then laid over this substructure.

Roof framing differs according to the shape of the roof (see ROOF AND ROOFING). The most common shape is the gable, or pitch, roof, which is a simple triangular section: the two sloping sides meet at the center, or ridge. Most roof shapes are variations of the gable. Roof frames consist of rafters that form the support for the roof covering. They are attached to the roof plate and slant upward to meet the ridge board. They may be reinforced by interior braces.

(Preassembled wood TRUSSES, which are complete rafter units, are now widely used in roof framing.) Plywood sheathing is nailed over the rafters, followed by air-resistant and moisture-resistant roofing paper and the exterior roofing material--usually asphalt shingle or slate.

## Finishing

Interior walls, or partitions, are made up of studs covered with panels of sheet rock, or dry wall. (The older wet wall construction--plaster laid over thin strips of wood called lath--was slow and expensive and for the most part is no longer used.) The hollow space left within the wall will

contain some of the plumbing, electrical wiring, and ductwork for certain types of heating and AIR-CONDITIONING systems. Other parts of these systems will be run through the exterior walls, the floors, and the ceilings.

Finish flooring and ceilings are now put in place. Interior trim such as doors, stairs, baseboards, and moldings is installed, along with finish plumbing and electric units: fixtures, switches, radiators, sinks, tubs, and so on.

Prior to exterior finishing, INSULATING MATERIALS are placed over or between the studs. Exterior plywood sheathing is then nailed over the studs, followed by building paper and the exterior finish material--wood shingle or siding, plaster or stucco, or masonry veneer." 3

**Application** Students trace slides on plain white paper using marking pen. Students meet to decide what type of building they will design.

**Materials** Slide projector. Slides of Southwest architecture and homes. Large sheets of white paper, marking pens. Handout of house construction terms.

**Objectives** Students will be able to apply the problem solving process. Students will be able to identify various characteristics of Southwestern Architecture. Students will be able to complete tracings of slides.

**Closure** Slides projected onto paper on classroom walls. Students tracing southwestern buildings.

**Assessment** Completed student tracings and participation in discussion.

### **Daily Lesson Plan Day 3**

**Topic** Southwest Architecture Research

**Delivery** Trip to school library with access to computers and internet. Include in the research the definition of the following architectural terms.

adobe	Anglo-American houses
bungalow	hogan
kiva	latilla
Spanish Mission	pit house
pueblo	Spanish Colonial houses
viga	

**Application** Students will use various reference sources in the school library including books, magazines, encyclopedias, videos and the internet to research southwest architecture.

**Materials** Computers connected to the internet. Library. Research guidelines handout. (fig. 2)

**Objectives** Students will be able to use group cooperative skills. Students will be able to tell about the history of Southwest. Students will be able to use various reference sources including books, magazines, encyclopedias, videos and the internet.

**Closure** Students will hand in research notes.

**Homework** Students will bring in pictures of Southwest homes and buildings from magazines,

newspapers or printed from the internet.

**Assessment** Grade research notes.

## **Daily Lesson Plan      Day 4**

**Topic** Southwest Architecture Around Us

**Delivery** Field trip to Old Town in Albuquerque.

**Application** Students will take sketch pads and handout on the history of Old Town and some of its buildings. Students will sketch at least three historic buildings.

**Materials** Sketch pads and markers or pencils. Handout on the history of Old Town in Albuquerque.

**Objectives** Students will be able to identify various buildings constructed between 1800 and 1900 in Albuquerque. Students will be able to sketch historic buildings.

**Closure** Students will post sketches on the bulletin board in the classroom, identifying the buildings and the year they were constructed.

**Homework** Students will write one-half-page description of a Spanish Mission built between 1800 and 1900 in the Southwest.

**Assessment** Students will grade others sketches.

## **Daily Lesson Plan      Day 5**

**Topic** Floor Plans, Elevations and Landscape Architecture

**Delivery** Students will work in their small groups using research notes and sketches. Students will have access to the resource books and slides of Southwest architecture in the classroom with information about floorplans, elevation drawings and landscape architecture.

**Application** Students will do a sketch of the floorplan, front, back and 2 side elevations of your structure using the research information about Southwest buildings. Put dimensions on the floorplan. Students will do a sketch of the landscaping in the town square of the new housing development.

**Materials** Sketch paper 17 x 22. Pencils, erasers, architecture textbooks, Southwestern architecture slides, slide projector and reference material on xeriscaping. Handout on Chaco Canyon, kivas and hogans. (fig. 3)

**Objectives** Students will be able to design buildings that replicate those constructed between 1800 and 1900 in the Southwestern United States. Students will be able to design a Town Square and the landscaping for it.

**Closure** Each group must hand in sketches of all elevations, the floorplan and the landscape architecture in the Town Square at the end of class.

**Assessment** Grade sketches.

**Daily Lesson Plan      Day 6, 7, 8, 9**

**Topic** CAD (Computer Aided Drafting) and Manual Blueprints

**Delivery** Students will begin to transfer the sketches onto the computers into Autocad (a commercial CAD program) or begin a manual blueprint of the landscape architecture in the Town Square.

**Application** Students will begin to transfer the sketches onto the computers into Autocad (a commercial CAD program) or begin a manual blueprint of the landscape architecture in the Town Square. The computer drawings will consist of a floorplan of the structure, electrical systems, heating and plumbing systems, front, back and 2 side elevations of the structure. The drawings will be fully dimensioned and then printed on the blueprint machine on D size paper (22" by 34") and will be done on a scale of 1/4" equals 1 foot. The blueprint will have a 1" border and a title block.

**Materials** Computers equipped with a CAD program. Size "D" paper. Manual drafting tools (T-square, architects scale, triangles, erasure shields, landscape templates, compass and mechanical pencils.) Sketches of all elevations, the floorplan and the landscape architecture in the Town Square.

**Objectives** Students will be able to use the CAD program to produce working blueprints of their structure or students will be able to manually draft a landscape blueprint.

**Closure** Students will print out on a printer on 8 1/2" by 11" paper the work they have completed during the class while transferring drawings into the CAD program or they will hand in the manually drafted landscape blueprint.

**Assessment** Grade printouts of drawings or manual blueprints daily.

**Daily Lesson Plan      Day 10**

**Topic** Model Construction Techniques & Cost Estimation

**Delivery** Teacher demonstration of tool safety, model building techniques and construction cost estimation.

Tool Safety Rules

Blades should be carried down and away from the body.

Never use a dull blade.

Keep blade at least two inches from fingers when cutting.

Never cut directly toward your body.

Always use a metal straightedge to cut against.

No jewelry.

Tie long hair back.

Keep all guards down when using power tools.

Always wear safety glasses while using power tools.

Never touch the metal part of the hot glue gun.

Never touch glue that has just been melted.  
Always keep the hot glue gun in its holder when not in use.  
Unplug glue gun when finished.  
Never run in the classroom.  
No fooling around.  
No gum, candy, food or drink in classroom.  
All tools must remain in model building area.

### Model Construction Techniques

Place your material for constructing the model on a large flat surface. Under your material place a large piece of chipboard that can be used as a cushion to cut on. Copy elevations, walls and floorplan onto model material. Place a metal straightedge (ruler) along the lines drawn and carefully cut the material. Do not try to cut through the entire thickness of the material with one cut. Make three or four cuts along the same line. When you wish to bend the material at a particular point, score the material with one gentle cut that does not go all the way through the model material. Make sure you cut out all windows and doors before gluing. Carefully use the glue gun to place several spots of glue along one of the edges to be joined. Then hold the second piece in place until the glue sets. Any gaps can be filled in with a clear drying white glue.

**Application** Students to brainstorm safety rules for using an exacto knife, a utility knife, a jigsaw, a handsaw, large paper cutter and hot glue gun. Teacher will demonstrate the correct procedure for cutting cardboard, chipboard or foamboard. Teacher will demonstrate the correct procedure for using the hot glue gun. Teacher will demonstrate the correct procedure for transferring blueprints to construction material to build a model where 1/8" equals 1 foot of the original dimensions. Students will list all the necessary materials to build their structure.

**Materials** Exacto knife, utility knife, jigsaw, handsaw, large paper cutter and hot glue gun. Blueprints of structure and landscape. Straight-pins, ruler, T-square, architects scale, triangles, erasure shields, landscape templates, compass and mechanical pencils. Chipboard, foamboard and cardboard.

**Objectives** Students will be able to use cutting and model construction tools safely. Students will be able to pass a tool safety test. Students will be able to be able to transfer blueprints to model making material.

**Closure** Review of Safety rules.

**Assessment** Test on safety (must get a grade of 100% before they can use tools.) Students begin transferring blueprints to model making material.

**Daily Lesson Plan** Day 11, 12, 13, 14

**Topic** Model Construction

**Delivery** Students will construct models on a 1/8"=1 foot scale of their blueprints. Students will research and record materials cost using telephone, catalogues and internet, for construction of buildings and landscaping.

**Application** Students will begin construction of the models.

**Materials** Exacto knife, utility knife, jigsaw, handsaw, large paper cutter and hot glue gun. Blueprints of structure and landscape. Straight-pins, ruler, T-square, architects scale, triangles, erasure shields, landscape templates, compass and mechanical pencils. Chipboard, foamboard and cardboard. Telephone, building material price catalogues and internet access.

**Objectives** Students will be able to construct 1/8" = 1' models of their blueprints. Students will be able to prepare a cost estimation sheet for a prospective client.

**Closure** Continued working on models and cost estimation sheets.

**Assessment** Daily journal of work accomplished during model making and cost estimation by each student.

## **Daily Lesson Plan      Day 15**

**Topic** Presentations to imaginary clients by students.

**Delivery** Student presentations of blueprints, models and cost estimations. (minimum 5 minute presentation)

**Application** Student presentations.

**Materials** Video camera to record presentations.

**Objectives** Students will be able to judge the quality of the work presented and chose the building styles most appropriate for the project.

**Closure** Students will view the presentations recorded on tape.

**Assessment** Students will fill out evaluation sheets on the project. The project grade will be a combination of teacher grade and student evaluation sheet. (80% teacher grade and 20% evaluation sheet grade)



(figure #1)

## **Library Research Form**

**Each Student will research Southwestern Housing from 1800 to 1900**

**Name**

**Date**

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This paper will be to take notes and record sources of information needed to complete in solving your architectural problem. The notes should include some examples of construction materials, general building styles and history of Albuquerque.

Use at least 5 resources for your notes. Hand in this page with your project. Notes are due at the end of class today.

**Resource #1**

Title

Author

Publisher

Date Published

**Resource #2**

Title

Author

Publisher

Date Published

**Resource #3**

Title

Author

Publisher

Date Published

**Resource #4**

Title/ Internet Address

Author

Publisher

Date Published

**Resource #5**

Title/ Internet Address

Author

Publisher

Date Published

**NOTES**

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#2) \_\_\_\_\_(figure

**CHACO CANYON, HOGANS AND KIVAS**

Chaco Canyon, in northwest New Mexico about 70 km (45 mi) south of Bloomfield, is the site of numerous ruins of the prehistoric ANASAZI culture, including the largest and most completely excavated multistoried communal dwelling, Pueblo Bonito. A national monument

from 1907, it was renamed Chaco Culture National Historic Park in 1980. The 88-sq km (34-sq mi) park constitutes, with MESA VERDE, one of the most extensive collections of pueblo ruins in the southwest.

In addition to the great multistoried, freestanding apartment houses of Pueblo Bonito, Chetro Ketl, and Pueblo Arroyo, there are numerous smaller sites, including a Basket Maker village of the period AD 450-750 and a restored Great KIVA (large ceremonial chamber) of AD c.1000. Pueblo Bonito is situated on the valley floor with its back to a towering mesa. Tree-ring dates indicate that construction of the huge building was begun around AD 900 and not completed until about 1115. Arranged in a D-shaped arc that encloses a central plaza, the pueblo reached a height of four stories and contained more than 650 rooms, with numerous subterranean kivas scattered through the complex.

In the ruins were found fine specimens of traditional PUEBLO black-on-white and corrugated pottery wares as well as outstanding examples of shell necklaces and pendants inlaid with turquoise, evidence of trading contacts with Mexican cultures. The great communal buildings of Chaco Canyon were abandoned during the 12th century, for reasons not yet understood by archaeologists.

hogan

A hogan is the traditional dwelling of the NAVAJO Indians of Arizona and New Mexico. It is an unpretentious structure, usually of logs and mud although occasionally of stone, designed to blend into the landscape. The walls are formed of horizontally placed logs built in toward the center, so that the roof is shaped like the top of a beehive. The entire exterior of some hogans is covered with earth. Most hogans have dirt floors and are without windows. The low entryway is usually covered with a blanket. The typical hogan contains little or no furniture, and members of a family sleep on sheep pelts arranged around a central fire.

{kee'-vuh}

Kivas (Hopi for "old house") are sacred ceremonial chambers of the present-day PUEBLO Indians of Arizona and New Mexico; they are also found in the ruins of the prehistoric ANASAZI culture. The kivas traditionally belong to the religious fraternities in Pueblo society, whose members perform secret rites from which the uninitiated are excluded. Most kivas are semisubterranean, built along clefts on the edge of the mesa with the roof of the kiva level with the ground surface. These rectangular or circular stone rooms have no doors and can be entered only by hatchways, descending by ladders through the roof. In addition to being used for the performance of esoteric rituals, the kivas also traditionally serve as council chambers and workshops, where the men do the weaving. (figure #3)

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## **Internet Sites and Reviews**

### **EXCITE Search Engine**

The World-Wide Web Virtual Library: Architecture  
Architecture Virtual Library A special resource for those who want to be an Architect. Groups:  
Schools Government Organizations Research Firms Jobs

<http://www.clr.toronto.edu:1080/VIRTUALLIB/arch.html>

Derren`s Architectural Web Page

Browse into areas which will lead you to the understanding of Architecture and its location of firms and institutions. [http://www.arch.su.edu.au/~wong\\_de/INDEX.html](http://www.arch.su.edu.au/~wong_de/INDEX.html)

Richtex Architecture & Building Links - Architectural & Construction I...

Richtex Architecture & Building Links is a meta-index of the best architectural directories on the World Wide Web.

<http://www.architecturelinks.com/>

UO Architecture and Allied Arts

The School of Architecture and Allied Arts offers professional education in architecture, interior architecture, landscape architecture, and community planning and public policy as well as opportunities for study in the history, theory, administration, and practice of the visual arts.

Renaissance and Baroque Architecture: Architectural History 102

The images included in this collection were scanned from slides taken by Professor C. Westfall and used in his survey course, Renaissance and Baroque Architecture (ARH 102), University of Virginia, School of Architecture, Department of Architectural History.

<http://www.lib.virginia.edu/dic/colls/arh102/index.html>

Arts: Architecture - Ferris State University Web Links

Arts Architecture Architecture, Design, History, Images and 3D Models Artifice Great Buildings Collection AEC InfoCenter: Architecture, Engineering, Building Construction

<http://www.ferris.edu/htmls/CONNECT/ARTS/archit.htm>

Art & Architecture Book Stores

Art & Architecture Book Dealers Listed below are links to book dealers who have large collections of art and architecture books for sale. We list them for your convenience, not as an advertisement or endorsement.

UCLA Architecture Websites

The following sites have been chosen by the Librarians in the UCLA Arts Library primarily for their potential usefulness for research and reference in architecture and architectural history.

Frank Lloyd Wright

PBS Frank Lloyd Wright Web site, a companion to the Ken Burns/Lynn Novick film, contains biographical information, drawings and blueprints, analysis of parallel architectural movements, critical reviews, and lesson plans centered around America's most famous architect.

<http://www.pbs.org/flw/>

Las Cruces, New Mexico

Welcome to Las Cruces, New Mexico. Our name means City of the Crosses. Over four centuries ago Spanish explorers brought their faith and their language to this land.

<http://www.weblifepro.com/lascruces/>

Early American Building Trades Robert Cottrell, Remick Museum & Robin Rohrkaste Crumrin, University Library, IUPUI Arbor, Marilyn. Tools and Trades of America's Past: The Mercer Collection.

<http://www.connerprairie.org/craftbib.html>

**This lesson plan is included because I recognize that some students complete assignments more rapidly than other students. In order for these students to continue the learning process and make best use of their time, here is an additional project for them to work on.**

### **Extra Lesson Plan**

**Topic** Environmental Impacts and Architecture.

**Delivery** Student reading and discussion.

**Application** Students will return to library for one period of research on new building materials and solar home design. Students are to draw a sketch of a Southwestern solar home or a straw-bale home.

**Materials** Research form, books, magazines, internet access.

**Objectives** Students will be able to identify environmentally sound housing. Students will be able to design either a Southwestern solar home or a straw-bale home.

**Closure** Students present drawings to class and explain the environmental impact of straw-bale housing.

**Assessment** Grade house designs and presentation.