



Architectural Differences in Design

Curriculum Unit 83.01.10
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PURPOSE

This unit is to be used in eleventh and twelfth grade drafting classes. It will provide material that is practical and related to vocational drafting. However it will also introduce students to elements of architectural style and type.

RATIONALE

This unit is intended for the beginning classes in architectural drawing after the students have had the basic and exploratory courses offered in mechanical drawing. Architectural drawing is usually offered as an elected course of their choice. They believe they are interested in that particular type of drafting; they have an interest in the building field; and they realize the value of detailing, planning, and designing as presented in the basic specialized course of architectural drawing as applied in the building field. Because of its exploratory value, as many as possible of the practical applications of the related vocations should be included so that the student acquires a well-rounded experience. This is particularly important because the student intending to specialize and receive further training in the subject should find out whether he is interested in the work and has the ability to succeed in it. Most students are able to make the elementary drawing involving line technique, views to be drawn, but dimensioning requires practical experience to know what dimensions the workman will need.

There are many things that influence exterior design. These include climate, taste and program requirements of the client, materials, and the basic design principles. While the design is being produced, all of these must be considered.

The design must reflect the architecture of a neighborhood. The part of the country in which the house is being built may restrict the design. This unit is intended to expose the students to the different architectural designs in their neighborhood and in New Haven. The style is the expression, the characteristic manner of design, which prevails at a given time and place; it is an expression of the housing needs, taste, and wealth of the community; it is not the result of accident, but rather an evolution of the intellectual, moral, social, and even political conditions of the time.

My aim is to expose the participants to some of the diversity of style and design and have them evaluate the different architectural designs.

Any type of house is good if it fits the site and environment as naturally as it fitted the local conditions from which it was evolved. Whatever the type, the essential qualities of a good house are proportion, scale, color, texture, rhythm, and repose. The erecting of walls, floors, and roofs; the relating of planes, solids, voids, so that each given meaning and expression, of a type of design of a house.

The shape of a house and the resulting type of the house have a decided influence upon the usable floor area. The greater the area of actual living space which can be obtained from a given shape the more economical and efficient the plan. There are other considerations such as the architectural effect produced and the feeling of roominess, freedom from crowding of space, and so on, which may offset some sacrifice of economy and efficiency.

OBJECTIVES

This unit will be a combination of the graphic language in a logical sequence of short units. The short units will be arranged to develop vocabulary, subject matter, and history related to the unit.

The following objectives are listed in sequence:

First, we all realize many inner-city students must develop a desirable image about themselves and their neighborhood . I believe students would get a better feeling about themselves and their neighborhood by learning the history of the buildings they live in and of many of the surrounding structures in their area.

Second, to develop a visual awareness of types of structures in their neighborhood and surrounding areas .

Third, to help create and develop a better strategy for identifying basic house designs .

Fourth, the students will be introduced to the different types of roofs on existing structures studied.

Fifth, the students will explore the various types of ornamentation on buildings covered in this unit.

STRATEGIES

As a teacher, I found students can openly discuss their home situations, I usually start any lesson with some kind of relation with the students. Because most of the students have had the experience of walking through the downtown area which has a long and interesting history, I would start my study of history around the Green.

New Haven settlers built homes styled to their economic and social status. The trend of style in New Haven are copies of colonial Georgian, Dutch English, and contemporary design. Teachers can initiate lessons from the existing types of dwellings in New Haven.

The following are the types found in the New Haven area.

Old English

This type is low in appearance, with the roof line at the head of the window and sometimes lower. They are built from stone, brick, stucco, and occasionally a bit of half timber. The roofs are generally tile or slate with a steep pitch.

Tudor

This type is very large with high chimneys and prominent gables, walls of masonry or stucco. The Tudor Roof has a steep pitch usually to the second floor ceiling line

Georgian

The front entrance is placed in the exact center of structure. The windows are placed in perfect symmetry. The doorways are usually flanked with pillars or pilasters.

Dutch Colonial

This type has a gambrel roof. It has a full second story, with overhangs boxed in. The chimney usually is on the interior. The exterior has shutters on all the windows.

Cape Cod

Cape Cods are one story or one and one-half story buildings. The roof is steep and gabled. The windows are double hung. Shutters are used on all windows.

Victorian

This type of house is very large and very heavily ornamented. They have no pleasing proportion of balance. This house has fancy trimming, usually ornately carved.

Roof Types

As teachers we must consider in our teaching types of roofs in common use. I will try to illustrate some of the types of roofs found in the New Haven area.

The following are some of the types of roofs found in New Haven:

Gable

Hip

Flat

Shed

Gambrel

Mansard

SAMPLE LESSON PLAN

Purpose: Students will try to find houses in their neighborhood which represent the basic types.

Objective: To have student recognize various types.

Method: The students will record the street address of each house and name what basic style it represents listed below. Students will make a rough sketch of each style.

Elizabethan

Georgian

Colonial

Cape Cod

Victorian

Bungalow

Modern

Non-descript (i.e. without style)

Ranchhouse

SAMPLE LESSON PLAN

Purpose: To teach various roof types.

Objective: To have the students become familiar with different types of roofs.

Method: The student will receive information sheet containing sketches of roof types. The teacher will explain how each roof type differs.

Variation: The student will record in school area roof types, using handout sheet to identify various roof types.

Roof Types

(figure available in print form)

PROBLEMS:

Listed below at the left are characteristics of houses. Match each with house type. Check under the type that has the characteristic.

Characteristics	Old English	Georgian	Elizabethan
Masonry walls	_____	_____	_____
Two stories	_____	_____	_____

Many gables	_____	_____	_____
Tile or slate roof	_____	_____	_____
Double hung windows	_____	_____	_____
Shutters	_____	_____	_____
Balustrades	_____	_____	_____
Balconies	_____	_____	_____
Stucco Walls	_____	_____	_____
Greek design	_____	_____	_____
Low roof	_____	_____	_____
Decorative	_____	_____	_____

TRUE—FALSE

Directions: If the statement is true, circle the T. If the statement is false, circle the F.

- T F 1. A building with a symmetrical exterior usually is more pleasing than one that is unsymmetrical.
- T F 2. If a building is in good balance, has good proportion of its parts, is to scale and has rhythm, it presents a feeling of unity.
- T F 3. Since the rear of a house is seldom seen, it is not necessary to consider it when styling the house.
- T F 4. The major influence upon Colonial American residential architecture came from Asia.
- T F 5. The Old English house was not symmetrical.
- T F 6. The Old English house was built primarily by the poor.
- T F 7. The English Tudor house closely resembled the Old English.
- T F 8. The Cape Cod cottage usually is two stories high.
- T F 9. Victorian houses were usually single story with a gable roof.
- T F 10. The original Ranch Houses were built right on the ground and had dirt floors.

Identify the following types of roofs:

(figure available in print form)

VOCABULARY

Words listed will provide students assignments in their textbooks or dictionaries for meaning of each word and use each word in a sentence.

- angle
- apron
- arch
- baluster
- beam
- bridging
- casement
- column
- corbel
- double-hung window
- eave
- face brick
- fascia
- gable roof
- hip roof
- lintel
- masonry
- mullion
- pitch
- shingles
- sill
- tangent

STUDENTS' BIBLIOGRAPHY

Goodban, William and Hayslett, Jack. *Architectural Drawing and Planning* , New York: McGraw-Hill Book Company, 1965.

Spence, William. *Construction Architectural Drawing* . Prentice Hall, Inc. New Jersey: 1976.

Williams, Henry Lionel, and Williams, O Hallie K. *A Guide to Old American Houses, 1700-1900* . New York: A.S. Barnes and Company, Inc. 1962. (American Architecture)

TEACHERS' BIBLIOGRAPHY

Wittkower, Rudolf. *Architectural Principles, The Age of Humanism*. New York: W.W. Norton & Company, Inc., 1971.

Rasmussen, Steen Eilel. *Experiencing Architecture* . M.T.T. Press, 1962, The Massachusetts Institute of Technology.

Brown, Elizabeth Mills. *New Haven, A Guide to Architecture and Urban Design* . New Haven and London, Yale University Press, 1976.

Persner, Nikolaus. *An Outline of European Architecture* . Penguin Booke, New York: 1943.

Clark, Gilbert and Zimmerman, Enia. *Art/Design: Communicating Visually* . Art Education, Inc., Publishers, New York: 1978, Unit 7: Environmental Design.

Fisher, Leonard Everett. *The Architects*. Franklin Watts, Inc., New York: 1970.

Salvadori, Mario. *Why Buildings Stand Up, The Strength of Architecture* . McGraw-Hill Book Company, Inc., 1982.

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