

Building Shapes: An Introduction to Architecture

Disciplines: Visual Arts and Mathematics

Length of Lesson: two or more 45 minute sessions

Teaching Artist: Nancy S. Campbell

In this introduction to architecture, students will learn about the use of shapes to compose building facades. Students will examine photographs of local buildings. Students will create their own building façade by collaging shapes to represent building components.

Students will draw and cut out geometric shapes, re-form with scissors pre-cut geometric shapes and assemble shapes to form 2-dimensional building facades.

Instructional Objectives:

In this lesson, elementary students will examine images of buildings, many local structures, to identify geometric shapes that compose building parts. Students will then construct their own building façade from paper shapes glued to colored paper.

Materials/Media:

large multicolored construction paper
pre-cut multicolor geometric shapes
scissors
glue

pencils
colored pencils
geometric patterns
rulers

Set:

The lesson will be introduced with images of buildings - including local structures - and a discussion of the geometric shapes that compose the building facades. Students will then work with pre-cut geometric shapes, patterns to draw and cut geometric shapes, and scissors to modify shapes to design and construct a building façade on colored paper.

Key Questions:

- Have you ever noticed shapes in buildings?
- Can you cut different geometric shapes from pre-cut shapes?
- Can you put shapes together to make new shapes?

During work time:

- Why does an artist need to plan a collage before applying glue?
- Do contrasting colors show up in your design more than similar colors?

Classroom Strategies:

Students may sit at regular desks or tables during introduction, planning, cutting, and development of collage. Students may work independently or may be paired or arranged in small groups while cutting, planning, gluing to share materials.

Students with higher achievement levels may assist those with lower achievement levels.

Instructional Procedures: (day two may begin with gluing)

1. Students will actively listen and participate in introduction to shapes in architecture. Images of building facades will be examined and discussed.
2. Teaching artist demonstrates using patterns, rulers and pencils to create paper geometric shapes from multicolor paper.
3. Teaching artist demonstrates reshaping pre-cut shapes.
4. Teaching artist demonstrates planning and revising design.
5. Students select a preferred idea. Teaching artist demonstrates carefully removing shapes from the design to apply glue sparingly to shapes and gluing the shape to colored paper. Gently lift paper to check gluing.
6. Students may apply pencil enhancement or collaged patterns to designs if there is time left.

Evaluation Strategies:

Informal: Students examine their own and other students' building facades to observe use of shapes. Classroom teacher will observe participation in discussion and hands-on project.

Formal: Classroom teacher will establish a rubric for establishing success.

Extensions: If time allows, students may present their collages to each other. Collages may be hung on a large streetscape collage in which students who complete their work first may contribute collage items (trees, streets, shrubs, streetlights...) to the class display.



They may also demonstrate architectural forms as a fun learning activity.

Tennessee Visual Arts Curriculum Standards

Standard 1.0 Media, Techniques, and Processes

Students will understand and apply media, techniques and processes.

1.1 Consistently use tools and materials in a safe and responsible manner.

1.2 Demonstrate an understanding of how to use selected tools and materials to create a work of art.

- *Students will use scissors, hole punches, and glue in project.*

Standard 2.0 Structures and Functions

Students will use knowledge of structures and functions.

2.1 Identify and use a combination of elements and principals of art to communicate ideas.

- *The student will design and construct a collage using elements and principles of design.*

Standard 6.0 Interdisciplinary Connections

Students will make connections between visual arts and other subjects.

6.1 Demonstrate an understanding of similarities and differences between the visual arts and other disciplines in the curriculum.

- *The students will utilize math skills in this project.*

Tennessee Mathematics Standards

Standard 4 Geometry and Measurement

GLE 0206 .4.1 Recognize, classify, and transform 2- and 3-dimensional geometric forms

GLE 0206.4.4 Compose and decompose polygons to make other polygons

0206.4.1 Describe common geometric attributes of familiar plane and solid objects.

- ✓ 0206.4.5 Use rulers to measure lengths and sides diagonals of common 2-dimensional figures and polygons.
- ✓ 0206.4.8 Combine polygons to form other polygons and subdivide a polygon into other polygons.

Architecture Projects by Nancy S Campbell with Very Different Groups:



Heritage High School Architecture Projects (two week project unit designing a plan & building model)



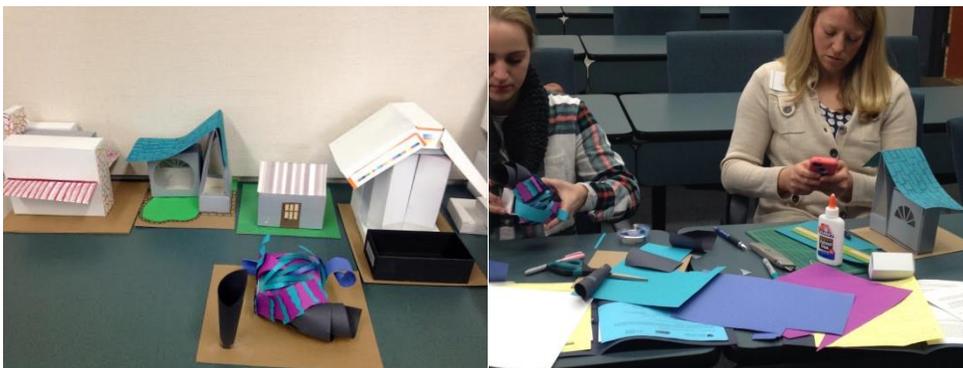
KMA Preschooler and mom



Jefferson County High School School Team School Design Model



Johnson City Arts Education Professional Development Workshop with teachers (years ago)



Johnson City Arts Education Professional Development Workshop with teachers (2015)

"I have worked with Pre-K, elementary, middle and high school students, as well as teachers and art specialists on custom-designed built environment projects." *Nancy S Campbell*

Nancy S. Campbell. 865-789-9528. 2200 Island Home Blvd. Knoxville TN 37920. eancampbell@gmail.com