

Antoni Gaudí: Architecture, Art Nouveau, Natural Forms

How do artists use natural forms and elements of art to design and create 3D architecture?

LESSON OVERVIEW/OBJECTIVES

Students will use elements of art and design with various art supplies to build their own 3-D masterpieces in the celebrated architectural style of Antoni Gaudí. Students will learn about the history and work of Gaudí whose style is fluid and organic. His later work, which is classified as Art Nouveau, combines many styles and shapes. Because of its relationship to natural forms, his architecture is often compared to dragons or sandcastles.

KEY IDEAS THAT CONNECT TO VISUAL ARTS CORE CURRICULUM:

Based on Utah State Visual Arts Core Curriculum Requirements (3rd Grade)

Standard 1 (Making): The student will explore and refine the application of media, techniques, and artistic processes.

Objective 1: Explore a variety of art materials while learning new techniques and processes.

- Practice using skills for beginning drawings.
- Use simplified forms, such as cones, spheres, and cubes, to begin drawing more complex forms.
- Explore the design possibilities of a 3-D object by examining views of it from many angles.

Objective 2: Use a broad range of art materials in supporting the visual arts needs at school.

- Use as many art materials as possible to help decorate the room.

Objective 3: Handle art materials in a safe and responsible manner.

- Ventilate the room to avoid inhaling fumes from art materials.
- Dispose and/or recycle waste art materials properly.
- Clean and put back to order art making areas after projects.
- Respect other students' artworks as well as one's own.

Standard 2 (Perceiving): The student will analyze, reflect on, and apply the structures of art.

Objective 1: Analyze and reflect on works of art by their elements and principles

- Determine how artists create dominance in their work; e.g., size, repetition, and contrast.
- Examine significant works of art and point out how the artists have created illusion or feeling of depth.

Objective 2: Create works of art using the elements and principles.

- Identify dominant elements
- Group some significant works of art by a common element or visual characteristic.

Standard 4 (Contextualizing): The student will interpret and apply visual arts in relation to cultures, history, and all learning.

Objective 1: Compare the arts of different cultures to explore their similarities and diversities.

- Describe why different cultures may have used different materials to create their arts and crafts.

INSTRUCTIONAL OBJECTIVES:

Students will:

- Understand that the elements of art are the building blocks for creating works of art.
- Recognize qualities of Art Nouveau and natural forms in design and architecture.
- Experiment with various media and recycled materials to create 3D structures.
- Learn about the artist Antoni Gaudi and his work.
- Learn about composition, structure, geometric shapes and forms.

FOR THE TEACHER

Looking and Seeing

Show students pictures of Antoni Gaudi and identify where he was born on a map. You can highlight significant events or historical highlights of the time to provide a context for Gaudi and his work. Then show students images of Gaudi's art and architecture. Identify the forms and shapes. See if you can find relationships between the forms or patterns amongst them. What kinds of feelings does the architecture evoke and why? Try to get the students to give specific answers about color, shape, form, etc. You can get the students to think about the art project by asking them to talk about what kind of structure they would design and build.

Some things to notice when looking at Antoni Gaudi's artwork:

- Gaudi has an organic flow and feel to his work.
- Gaudi's use of natural forms gives it an easy way of connecting pieces, shapes and forms.
- Many of the natural forms Gaudi uses are geometric shapes in three dimensional form. He frequently used elliptic paraboloids (looks like an oval cup), and a hyperbolic paraboloid (looks like a saddle).

VISUALS



Park Guell





Gaudi mosaic painting





Sagrada Família



The Park Güell (1900-1914)

SUPPLIES

- Images and art samples of Anton Gaudi presented in this lesson
- Images of Gaudi's architectural projects
- Map of the United States - to remain in classroom or accessible for students
- Painbrushes and watercolors
- Cardboard for the base
- Paper Towels
- Crayola Model Magic
- Plastic gemstones, aquarium gravel, pebbles, tiles or other decorative craft items.
- Scissors
- Washable Glitter Glue and regular glue
- Varied colors of Construction Paper
- Recycled materials

VOCABULARY

Art Nouveau - a style of decorative art, architecture, and design prominent in western Europe and the US from about 1890 until World War I and characterized by intricate linear designs and flowing curves based on natural forms such as flowers and leaves.

Modernism: modern character or quality of thought, expression, or technique. A style or movement in the arts that aims to break with classical and traditional forms.

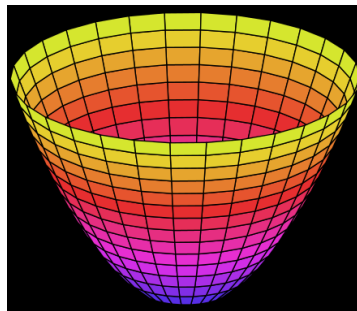
3-D Art - having, or seeming to have, the dimension of depth as well as width and height.

Natural Form - The natural form of an object which has not been altered or manipulated, but is in its' original form found in nature. Through Art, natural form can be depicted as a representation of the original object.

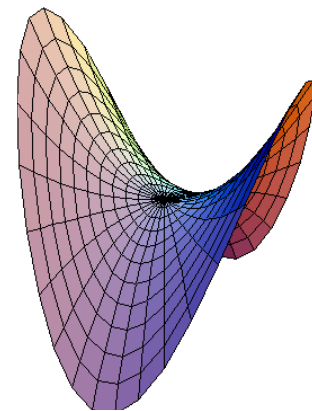
Architecture - the art or practice of designing and constructing buildings.

Elliptic and Hyperbolic Paraboloids - In mathematics, a paraboloid is a quadric surface of special kind. There are two kinds of paraboloids: elliptic and hyperbolic.

The elliptic paraboloid is shaped like an oval cup and can have a maximum or minimum point.



The hyperbolic paraboloid (not to be confused with a hyperboloid) is a doubly ruled surface shaped like a saddle.



INSTRUCTIONAL PLAN

Quick Writing and/or discussion

Before beginning the lesson, show images of Gaudi's architecture, paintings and mosaic work. Ask them to see if they can find images of natural forms and describe them. Give them a few minutes to respond to the images. Encourage comparisons and contrasting statements as well as descriptions of what they see. Use any of the following prompts:

- How do you think the artist made this artwork?
- What details do you notice about the artwork?
- How is Gaudi's work different than other buildings or architectural structures you have seen?
- What natural forms can you find in his work?

Introduction

Introduce your students to concepts of art nouveau, architecture, natural forms, and three dimensional work. These ideas may be new to your students but you have the visual art pieces to help explain the concepts.

About the Artist

Antoni Gaudí (born 1852, Spain), a Spanish architect born in Barcelona, Spain, had a unique vision. Although his first buildings were based upon Gothic architecture, his style eventually became more fluid and organic. His later work, which is classified as Art Nouveau, combines many styles and shapes. Because of his relationship to natural forms, his architecture is often compared to dragons or sandcastles.

A son of a boilermaker and copper smith, Gaudi helped his father forge boilers and cauldrons in the family foundry. This is where Gaudi's fascination with three dimensional and organic forms began. Afflicted from an early age with reoccurring rheumatic fever, the young architect devoted his energies to studying and drawing flora and fauna in the natural world. By the late 1870's, when Gaudi was well into his twenties, his career got the boost it needed when he met Eusebi Guell, heir to a textiles fortune and a man who, like Gaudi, had a refined sensibility.

In 1883 Gaudi became Guell's architect and for the next three decades, until Guell's death in 1918, the two collaborated on Gaudi's most important architectural achievements, from high-profile endeavors like Palau Guell, Park Guell, and Pabellones Guell to smaller projects for the Guell family.

If Guell had not believed in Gaudi's unusual approach to Modernism, his creations might not have seen the light of day. Guell recognized that Gaudi was imbued with a vision that separated him from the crowd. That vision was his fascination with the organic. Gaudi had observed early in his career that buildings were being composed of shapes that could only be drawn by the compass and the T-square: circles, triangles, squares, and rectangles - shapes that in three dimensions became prisms, pyramids, cylinders and spheres. He saw that in nature these shapes are unknown. Admitting the structural efficiency of trees, mammals, and the human form, Gaudi noted, "... neither are trees prismatic, nor bones cylindrical, nor leaves triangular." The study of natural forms revealed that bones, branches, muscles and tendons are all supported by internal fibers. Thus, though a surface curves, it is supported from within by a fibrous network that Gaudi translated into what he called "ruled geometry," a system of inner reinforcement he used to make hyperboloids, conoids, helicoids, or parabolic hyperboloids.

These tongue-tying words are simple forms and familiar shapes: the femur is hyperboloid; the way shoots grow off a branch is helicoidal; the web between your fingers is a hyperbolic paraboloid. To varying degrees, these ideas find expression in all of Gaudi's work but nowhere are they more clearly stated than in the two masterpieces La Pedrera and Park Guell.

In his old age, Gaudí was a man that was conformed with little and dressed without much care; so much so that the day of his accident nobody recognized him as he lay on the ground. On June 7, 1926, he was run over by a tram at the intersection of Carrer de Bailén and the Gran Vía, and the taxi drivers refused to take a poor vagabond to the hospital (the municipal police fined them later for not assisting an injured man). Gaudi passed away seven days later.

Lesson Plan

1. After introducing Antoni Gaudi and his work above, provide a variety of texts, articles and photographs focused on Gaudi's work, as resources for students.
2. Invite the students to use recycled materials and/or materials provided to create their own imaginary construction.
3. On a firm flat surface such as bristol, card stock, cardboard etc., have students arrange the provided materials, recycled and other, to look like an interesting building. On the working surface, flattened balls of Crayola® Model Magic or a similar material can be used to position the containers near each other. Demonstrate how to place Crayola School Glue or other glue on the flat surface before applying Model Magic. Press the containers into the Model Magic to form an armature for castles. Provide time for students to experiment with this process and their recycled materials.
4. Students add details to the surface of their containers with small balls of Model Magic and glue. Press pieces of Model Magic close together—when it is fresh from the pack, it sticks to itself!
5. Architectural details, such as fancy cornices or a thatched roof, can be added. Texture them with the ends of paint brushes or other tools. Air-dry construction at least 24 hours or as needed.
6. Encourage students to fill any spaces with Model Magic details. Use plastic gemstones, aquarium gravel, pebbles, tiles, or other decorative craft items to create a mosaic effect. These pieces can be glued to the surface.
7. Fill in the areas that you textured by applying watercolor paint with a paint brush. Dilute the paint with water so it mixes on the building for an interesting, colorful effect. Air-dry the paint.
8. Students can add sparkling touches with Glitter Glue. Air-dry the castle.
9. If time permits, invite students to create plants and shrubs to landscape the area around the Sandcastle. These can be cut from construction paper and glued in place. Add a walkway, steps, and outside ornamentation with Model Magic®. Fill in surrounding areas with colorful gravel or other recycled, colorful materials.
10. As a group, students compose a summary of how their artwork was influenced by Gaudi's work. Post this summary with the artwork for classmates and parents to view.

Lesson Plan adapted from <http://www.crayola.com/lesson-plans/sandcastle-rooflines-lesson-plan/>.

Reflect

Arrange students' work on tables or desks and give them a few minutes to look at each other's work. As a group, discuss the different art structures. What do some of the examples bring to mind? What shapes do they see? Discuss the types and styles of structures created.

Have students respond to one of the following prompts•

The best thing about this activity was _____.

- It was hard for me when I had to _____.
- Next I would like to experiment with _____.



Lesson Extensions

Social Studies

Describe ways in which language, stories, folktales, music, and artistic creations serve as expressions of culture and influence behavior of people living in a particular culture.

Use appropriate resources, data sources, and geographic tools to generate, manipulate, and interpret information.

Identify and describe ways family, groups, and community influence the individual's daily life and personal choices.

Give examples of and explain group and institutional influences such as religious beliefs, laws, and peer pressure, on people, events, and elements of culture.

Supplemental Materials

<http://www.barcelona-tourist-guide.com/en/gaudi/barcelona-gaudi.html>

http://www.gaudiclub.com/ingles/i_vida/i_vida5.html

Adaptations

- Encourage students to research other artists such as Frank Lloyd Wright. Compare and contrast Gaudi's architecture to Wright's. Create an example of Gaudi's style of construction that is similar to Wright's "Falling Water" or other buildings.
- Nature is an inspiration for many artists. Research artists and architects to reveal the use of nature in their work.
- In building additional sculptures, encourage students to make use of recycled materials.