Josef Albers:
The Interaction of Color
EDUCATOR GUIDE
Welcome to the Bechtler

Dear Educator,

We are thrilled to introduce you to the exhibition *Josef Albers: The Interaction of Color*. This exhibition features a selection of prints from Josef Albers’ landmark portfolio, *The Interaction of Color*, originally conceived of as a handbook and teaching aid for artists, educators, and students.

This educator guide provides a framework for introducing educators and students to the exhibition and offers suggestions for activities and classroom reflection directly related to the exhibition’s content, key themes, and concepts.

We look forward to sharing a world of color with you.

Enjoy the experience!
On the cover: Josef Albers (American, born in Germany, 1888-1976), V-3 Lighter and/or Darker-Light Intensity, Lightness from The Interaction of Color portfolio, 1963, printed 1973, silkscreen on paper, 14 7/16 x 10 7/8 x 5 1/2 in.
Learning Standards

The projects and activities in this educator guide address national and state learning standards for the arts, English language arts, social studies, and technology.

**National Arts Standards: Visual Arts at a Glance**

**Common Core Standards**
http://www.corestandards.org/

**North Carolina K-12 Standards, Curriculum, and Instruction**
https://www.dpi.nc.gov/districts-schools/classroom-resources/k-12-standards-curriculum-and-instruction
https://sites.google.com/dpi.nc.gov/k-12-sci/home?authuser=0

**Charlotte-Mecklenburg County Schools, Curriculum and Instruction**
https://www.cms.k12.nc.us/cmsdepartments/ci/arts-ed/visual-arts/Pages/default.aspx
Josef Albers (American, born in Germany, 1888-1976) was one of the most influential artist-educators of the twentieth century. His exploration and expansion of complex color theory principles and dedication to experiential education based on observation and experimentation radically altered the trajectory of arts education in the United States. On view in this exhibition is a selection of prints from Albers’ landmark portfolio The Interaction of Color, originally conceived of as a handbook and teaching aid for artists, educators, and students.

As a student and then faculty member of the Bauhaus in Germany during the 1920s, Albers studied and taught alongside artists such as Paul Klee and Wassily Kandinsky before the school was forced to close under pressure from the Nazi authorities in August 1933. With the assistance of the American architect, Philip Johnson, Albers, and his wife Anni (a Jewish German-born textile artist and printmaker) secured an invitation to teach at the newly formed Black Mountain College just outside of Asheville, North Carolina. As head of the painting program from 1933-1949, Albers taught classes in color, design, and painting that placed practice before theory and emphasized both intellectual and personal expansion. In his classes, Albers developed a series of successive practical exercises that demonstrated such principles as color relativity, gradation, intensity, and temperature; vibrating and vanishing boundaries; reversed grounds and the illusion of transparency. In 1950, Albers left Black Mountain to become the chairman of the department of design at Yale University where he would continue to expand his investigation into the nature of color in a classroom setting until his retirement from teaching in 1958.

In 1963, he published The Interaction of Color, a limited-edition portfolio representing the culmination of 30 years of studying and teaching color. Containing an introductory text, 80 prints, and an additional section of commentary, the portfolio was dedicated to his students, who he acknowledged for having “visualized and discovered new problems, new solutions, and presentations.” Considered radical at the time of its publication, The Interaction of Color has become an indispensable and essential resource for students of art and design around the world.

Anastasia James, Curator, Bechtler Museum of Modern Art

For more information about the exhibition:
bechtler.org
Activities

Before visiting the Bechtler Museum of Modern Art, we recommend that you and your students explore and discuss various ideas, themes, and specific works found in the exhibition. We have included a selection of images from the exhibition in this guide, along with relevant information pertaining to the artworks. The images may be printed and or projected in a virtual or physical classroom.

Pre-Visit Objectives

- Introduce students to the artist, Josef Albers, and a selection of works in the exhibition. See resource list at the end of this guide for biographical information.
- Examine the key concepts and themes that are central to the exhibition.
- Learn about Josef Albers’ experimental way of studying and teaching color through experience-based activities.

Learning about Color

1. **Color is all around us.** Josef Albers believed in the power of observation and experimentation and often asked his students to gather materials for art making from the world around them. Look around the room you are in. What colors do you see? Gather three-five small objects of different colors and share them with your classmates. Discuss which color is your favorite and why? Describe which emotion best represents the color you have identified as your favorite? Did any of your classmates choose the same favorite color?

2. **Relativity of Color.** In Josef Albers’ classes, he often began by having students explore how different colors can influence or change each other depending on how colors are paired together or overlapped with each other. He believed that through observation, students could begin to develop an eye for color in a more complex way. For this activity, have students select three pieces of construction or opaque paper in three different colors. Have them cut out two small identical shapes from one color (reference study IV-3 A Color Has Many Faces – The Relativity of Color on page 7 of this guide). Place each shape on the two other pieces of paper of different colors. Try different combinations. Students may glue the shapes down to the backgrounds to create a finished work. Have the students talk about how the different grounds influence the color of the smaller shapes. Ask the students to share their exercises. Discuss which color combinations are more successful at influences each other and which are not.

3. **Transparence.** Another way that colors can influence and change each other is through the principle of transparence. For this activity, have your students select at least two sheets of colored tissue paper in different shades to create an overlapping composition (reference study IX-1 Color Mixture in a Paper – Illusion of Transparence on page 8 of this guide). When the tissue paper overlaps, a third or multiple colors will be created because tissue paper is transparent. Students are encouraged to progress from simple mixtures, such as blue and yellow producing green, to less common pairs, such as pink and ochre. For a more intensive experience, keep the area of the mixture larger than those of the two mixing ones. Have your students describe the new colors created in the overlapping areas. Were there any surprises? Have your students share their creations with their classmates. Once the shapes have been created, students can glue the shapes of tissue paper on a larger piece of white paper to create finished work.
Select Works from Josef Albers: The Interaction Of Color

Josef Albers
American, born in Germany (1888-1976)

IV-3 A Color Has Many Faces – The Relativity of Color from The Interaction of Color portfolio 1973
Screenprint on paper
14 7/16 x 10 7/8 x 5 1/2 in.

In this exercise, two shapes on the left grills, and the right rectangles of the same color and the same size, are placed on large grounds of different colors. Students will become aware that change is the result of influence and that the influencing color can be distinguished from the influenced color. Successful studies present a demonstration. Since they cannot be misread or misunderstood, they prove understanding both of the principle involved and of the materials to manipulated.
Josef Albers
American, born in Germany (1888-1976)

*IX-1 Color Mixture in a Paper – Illusion of Transparence*
from *The Interaction of Color portfolio* 1973
Screenprint on paper
14 7/16 x 10 7/8 x 5 1/2 in.

In painting, it is easy to mix pigments by pouring them together and stirring them, which achieves an in-between color as a mixture. Since this is not possible with paper, we must imagine a possible “in-between” color. In the plate on the right, part of a brown triangle is superimposed on a rosy-red rectangle creating a new color in the overlapping area. In order to make the eye read this double illusion of mixture and of transparence, the colors must be placed in overlapping shapes. Students are encouraged to progress from simple mixtures, such as blue and yellow producing green, to less common pairs, such as pink and ochre. For a more intensive experience, keep the area of the mixture larger than those of the two mixing ones.
Josef Albers
American, born in Germany (1888-1976)

*XII-1 Optical Mixture – After Image Revisited from*  
*The Interaction of Color portfolio* 1973  
Screenprint on paper  
14 7/16 x 10 7/8 x 5 1/2 in.

This illusion is known as “optical mixture.” It is when two or more colors perceived simultaneously appear combined as a third actual color, a mixture which annuls and replaces the previous factual colors. Students are encouraged to explore with paper of different patterns such as the ones shown here.
Although quantity and quality often are considered disparate, in art and music they appear to be closely related. The two basic quantity questions are how much and how often, one of size and one of recurrence. Both measurements concern predominance and emphasis. The exercise on the right examines quantity and a reversal of the initial inclination to employ the ground as the largest area. Here, the figure above the ground dominates through recurrence plus amount, or repetition plus extension.

On the right is a study of harmony. Color systems usually lead to the conclusion that certain constellations within a system provide color harmony. They indicate that this is mainly the aim and end of color combination, of color juxtaposition. As harmony and harmonizing is also a concern of music, a parallelism of effect between tone combinations and color combinations seems unavoidable and appropriate. Tones appear placed and directed predominately in time from before to now to later. In this study, the repeated subdivision of four circles demonstrates extreme cases of connection and separation within and among circles.
Josef Albers
American, born in Germany (1888-1976)

*XXIV-1 The Equilateral Triangle – Color Systems from The Interaction of Color portfolio* 1973
Screenprint on paper
14 7/16 x 10 7/8 x 5 1/2 in.

This study represents one of the final exercises in *The Interaction of Color*. For Josef Albers, developing a sensitive eye for color was the primary concern for his students. Because of this, color systems (such as color wheels or triangles) were not presented at the beginning, but at the end of his course.
More Activities

Objectives
• Reflect and discuss some of the ideas and themes from the exhibition.
• Further explore some of Albers’ ideas on color theory and processes through artmaking.

Museum Visit Reflection
After the museum or virtual visit, ask your students to write about their experience. Did the exhibition give them any new ideas? Did the students see different techniques that look familiar? Are the students left with questions? Ask everyone to share their thoughts with the class.

1. Found Objects and Color. Draw a large triangle on a white sheet of paper. Have your students ask their adult or caretaker for a magazine or pack of construction paper that they can cut up. Have the students cut out nine identical triangles in nine different colors. Have students arrange the smaller triangles within the larger triangle. Reference the study XXIV-1 The Equilateral Triangle (found on page 11 of this guide). Have students glue down their triangles and discuss how the colors are working together. Have students compare their choices of colors and discuss as a group.

2. Tints and Shades. A tint is when a color is mixed with white and a shade is when a color is mixed with black. Josef Albers experimented with shades and tints in his artworks. Look closely at his work on pages 7-11 of this educator guide. What kind of analogous color combinations do the students see? What colors have added tints and shades? Taking influence from Albers, cut a piece of white paper into a square. Now invite the students to use masking tape to section off several squares. You may use scissors to cut the tape into thinner strips if desired. Now pick one color to use for creating tints and shades of that color. What are the differences you see? How are the different colors and squares interacting with one another?
Links

The Josef & Anni Albers Foundation
https://albersfoundation.org/

#AlbersForKids exercises for children of all ages
https://www.albersforkids.org/exercises/

Mensa for Kids: Introduction to Color
https://www.mensaforkids.org/teach/lesson-plans/introduction-to-color/

Interaction of Color App
http://interactionofcolor.com/

Josef Albers teaching at Yale by John Cohen, c. 1955
Silent film, 14 minutes. This is the only film of Albers teaching in the classroom. Albers aimed to lead students to a more sophisticated use of their vision, believing that the fundamental building block of art education was to learn to see more acutely. Copyright John Cohen / The Josef and Anni Albers Foundation, 2013.
https://vimeo.com/77608435
The Bechtler Journey

Hans Bechtler credited his brother Walter for leading the way to the family’s interest in modern art. In 1950, the brothers began to visit the Kunsthart museum in Zurich. They frequented local galleries, purchased art and made friends with artists. These early forays into the art world led Hans and his wife Bessie on a journey of almost 70 years in which the couple amassed a collection of incredible depth and diversity. The couple preferred art that revealed the working methods of the artist, and to this end acquired drawings and other preparatory work related to the artists’ total oeuvre. The Bechtler brothers incorporated art into their workplaces and the family passed on the admiration for modern art and respect for the artists to their children.

Andreas, the son of Hans and Bessie, grew up around artists and became an artist himself as well as an entrepreneur. Business holdings brought Andreas Bechtler to Charlotte, North Carolina and he chose to make the city his permanent home. After inheriting a portion of his parents’ extensive collection, and augmenting it with his own acquisitions, Andreas decided to commit the collection to the city of Charlotte.

“What an incredible journey this has been. I never thought I would have an art collection for which a museum would be built but here we are.” —Andreas Bechtler, 2009

Bechtler Museum of Modern Art

The Bechtler Museum of Modern Art is one of Charlotte’s most inspired and inspiring spaces. Designed by the eminent Swiss architect Mario Botta, the museum’s architecture displays a sculptural power that connects to the dynamic art inside it.

A key design element of the four-story structure is the soaring glass atrium that extends through the museum’s core and diffuses natural light throughout the building. The open atrium allows for visual interplay between spaces. Other notable features include a vaulted skylight system and an enveloping terra cotta exterior.

The building’s dominant feature is the fourth-floor gallery which makes a bold and dramatic statement as it flies out from the core of the building, cantilevered and supported by a swelling column rising from the plaza below. Inside, Botta maintained a rigorous but elegant simplicity in the palette of materials which include steel, glass, terra cotta, black granite, polished concrete and wood. Botta also designed select pieces of furniture for the museum including the reception desk, café bar, gallery benches and hanging globe lights.
The Architect, Mario Botta

Swiss master architect Mario Botta is world renowned for his minimalist style and use of traditional materials such as brick and stone. His buildings respect topographical conditions, regional factors and building materials. The Bechtler Museum of Modern Art reflects Botta’s flair for strong, contemporary structures that layer colors, textures and materials. Exercising his modernist viewpoint, Botta designed the Bechtler to not only stand apart as a unique contribution to the urban landscape, but also to serve as a strong aesthetic partner among a group of individual design statements. Botta is considered one of the world’s foremost architects whose career spans a variety of building types. He has accepted only two commissions in the United States: the San Francisco Museum of Modern Art and the Bechtler Museum of Modern Art – iconic structures that enhance each cityscape.

Feedback
Please let us know what you think of these materials. Email us at education@bechtler.org.

For more information about the Bechtler and our programs, please visit bechtler.org.