

WILLIAMS COLLEGE MUSEUM OF ART EDUCATORS' GUIDE

THE ABCDS OF SOL LEWITT

November 18 – December 5, 2008

February 24 – May 8, 2009



Elementary, Middle, and High School Levels

WILLIAMS
COLLEGE
MUSEUM
OF ART

encounter art.

Front image:

WCMA's atrium, designed by Charles Moore, featuring *Wall Drawing #959: Uneven Bands from the Upper Right Corner* by Sol LeWitt (American, 1928–2007)

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OVERVIEW

We look forward to your visit to the Williams College Museum of Art (WCMA). We hope that this educational material will help you integrate your experience at the museum into your classroom teaching before and after your visit.

The Tour:

Your group will tour the exhibition, **The ABCDs of Sol LeWitt**. Students will be introduced to the foundational principles of Sol LeWitt's work and his influence on conceptual art. Tours will trace the progression from LeWitt's ideas to his collaborative artmaking process that informed his colorful wall drawings and three-dimensional structures. Drawn from the artist's collection, this exhibition features rare documents, drawings, and sculpture. This project is part of a partnership among Williams, Yale University Art Gallery, and MASS MoCA, which is presenting over 100 LeWitt wall drawings. Field trips that combine a visit to WCMA and MASS MoCA are encouraged. Tours at WCMA include hands-on activities and art games.

Before and After Your Visit:

To help you use this material in your teaching, this guide contains:

- Introduction to what is on view in the exhibition
- Background Information on Sol LeWitt and conceptual and minimalist art
- Making Connections – suggestions for using art, writing, and mathematics to make connections to different disciplines, meet standards, and build

literacy skills

- Pre- and Post-visit Activities with lesson plans for discussion, writing, and art-making activities
- Recommended Resources for further exploration

The ABCDs of Sol LeWitt pre- and post-visit activities are designed to be integrated with **visual art, English, and mathematics** curricula. Educators can adapt these project suggestions to their students' level. Activities are designed with the national and Massachusetts state standards in mind; educators who would like assistance in matching standards to their projects are invited to contact us.

Should you have any questions or wish to share any of the creative work your students complete using this education material, we would love to hear from you.

Contact the Education Office at 413-597-2038.

INTRODUCTION TO THE EXHIBITIONS

About the partnership:

The Williams College Museum of Art presents *The ABCDs of Sol LeWitt*, an exhibition featuring important works from the private collection of Sol LeWitt and designed to explore the underlying grammar of the artist's work and ideas. *The ABCDs of Sol LeWitt* is presented on the occasion of the opening of the MASS MoCA installation, *Sol LeWitt: A Wall Drawing Retrospective*, which was made possible by a partnership among MASS MoCA, the Williams College Museum of Art, and the Yale University Art Gallery.

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"We are thrilled to be collaborating with the LeWitt Collection on this exhibition," says Director Lisa Corrin. "The unprecedented presentation of over a hundred wall drawings at MASS MoCA provides a timely occasion for the Williams College Museum of Art to investigate the work of such an important figure in contemporary art and will lay the groundwork for teaching across the disciplines in years to come. *The ABCDs* inaugurates a series of annual programs and teaching exhibitions that WCMA will organize during the twenty-five-year run of the *Retrospective* at MASS MoCA." As Cynthia Way, Director of Education and Visitor Experience, explains, "We are developing curricular material jointly with MASS MoCA, our Kidspace program, faculty, and teachers. This educator's guide is an initial platform from which to build ongoing resources as part of this partnership."

About the Exhibition:

The **ABCDs of Sol LeWitt** was organized by Erica DiBenedetto, Williams College Graduate Student in the History of Art, Class of 2009, with Lisa Corrin, Class of 1956 Director of the Williams College Museum of Art.

The **ABCDs of Sol LeWitt** examines the visual vocabulary and aesthetic principles that LeWitt employed throughout his forty-year career. One of the pioneers of conceptual art in the 1960s, LeWitt emphasized the importance of ideas in artmaking. The exhibition will showcase a range of documents, sketches, drawings, and three-dimensional structures that illustrate the foundations of his work. The exhibition begins with a handwritten note in the margins of a typewritten page reading, “The idea becomes a machine that makes the art.” This note in the artist’s handwriting is the first instance when LeWitt formulated this famous credo. Viewers will have the opportunity to view this rare document and explore how it informed LeWitt’s career.

The **ABCDs of Sol LeWitt** highlights the conceptual process LeWitt articulated in the 1960s and reinterpreted through a variety of media. For LeWitt, the artmaking process was central to an artwork—even surpassing the final art object. His process began with an idea which he articulated through instruction-based text. LeWitt often used drawings and sketches to further unfold and craft his ideas. These ideas were then realized in three-dimensional structures and wall drawings. This approach—making an idea manifest in myriad forms—is the touchstone of LeWitt’s artistic practice.

The **ABCDs of Sol LeWitt** traces LeWitt’s creative process as it is realized in both two- and three-dimensional forms. The artworks on view share a conceptual approach as well as formal similarities. LeWitt’s fascination with geometric compositions is explored in a variety of media: for example, *Drawing Series IV/12 B/2431*, 1969, a black and white line drawing; *ABCD 9 (Row)*, 1966, large, white cubes arranged on a floor grid; and a group of *Complex Forms*, tall, white, polygon sculptures, including an example given to the museum by Sol and Carol LeWitt, installed in the museum’s neoclassical rotunda.

In the early part of his career, LeWitt focused on line, pattern, basic geometric shapes, and a limited color palate. These formal characteristics were so consistent throughout his work that they can be described as a kind of visual vocabulary, or grammar. Similar to a written syntax, LeWitt combined the components of his visual vocabulary to articulate ideas. In addition, writing plays an important role in his work, both in terms of the instructions he

wrote to guide assistants in producing his wall drawings and reflections on his process that influenced countless artists. In the latter part of his career, LeWitt introduced a whimsical use of bright colors and amorphous forms to his previously geometric vocabulary. Viewers will be able to make visual connections between LeWitt's early works in this exhibition and the brightly colored wall drawing, *Wall Drawing #959: Uneven Bands from the Upper Right Corner*, in the museum's atrium.

BACKGROUND INFORMATION

Sol LeWitt: Conceptual Art, Minimalist Art, and Artistic Collaborations

Tours of *The ABCDs of Sol LeWitt* will explore the fundamental principles, creative process, and persistent themes of Sol LeWitt's work, from his influence on minimal and conceptual art to his innovative sense of artistic collaboration. The exhibition will showcase a range of rare documents, sketches, drawings, and three-dimensional structures that illustrate the foundations of his work.

CONCEPTUAL ART

In 1967, LeWitt wrote two seminal texts in which he outlined his thoughts on the artistic process. His "Paragraphs on Conceptual Art" and "Sentences on Conceptual Art" were widely read and influenced artists and art theorists of LeWitt's generation. Perhaps most well known is a section from the "Paragraphs" where LeWitt asserts the importance of ideas in artmaking: "In conceptual art the idea or concept is the most important aspect of the work. When an artist uses a conceptual form of art, it means that all of the planning and decisions are made beforehand and the execution is a perfunctory affair. The idea becomes a machine that makes the art."¹ In addition to the logical notion of art as a machine, LeWitt also blended less rational concepts into his work. In the "Sentences on Conceptual Art" he wrote: "Irrational thoughts should be followed absolutely and logically."² To this end, he posits artistic endeavors as human, aesthetic, and delightfully inconsistent in their own artistic logic. These two strands of thinking—the logical and the fanciful—played out across the span of LeWitt's career.

Around the time when he wrote "Paragraphs" and "Sentences," LeWitt began working with simple, geometric forms. He became fascinated with the

1 Sol LeWitt, "Paragraphs on Conceptual Art," *Artforum* 5, no. 10 (June 1967), pp. 79-83.

2 Sol LeWitt, "Sentences on Conceptual Art," 0-9, (1969).

cube—an inherently stable, balanced form, and he methodically investigated and transformed it in exciting ways throughout the rest of his career. In the 1960s, he focused on straight lines, cubes, and squares and worked in a black and white palette. He then transformed these basic elements into a dynamic visual vocabulary that he investigated in color and in his two- and three-dimensional works.

In the mid-1960s, LeWitt made his first Series artworks. He wrote descriptions and made diagrams of arbitrary systems in which he would propose an idea and follow it through to its conclusion. For example, in *Drawing Series IV/12 B/2431*, 1969 (fig. 1), LeWitt explores the myriad permutations of organizing vertical, horizontal, and diagonal lines within a square. He addresses the question: how many possible combinations are there of these four types of lines? Written instructions for creating the systems, small visual diagrams or keys, and descriptive titles were presented to clue the viewer in to the idea behind the artwork (fig. 2). LeWitt would then often realize these systems as three-dimensional structures, such as *ABCD 9 (Row)*, 1966 (fig. 3), carrying through on his credo to follow a concept through to its very end. In this piece, LeWitt takes two interlocking squares and plays with the possibilities of them being open, closed, short, or tall. The final realization of this idea shows the different types of white cubes on top of a floor grid, looking similar to an oversized chess board.

Throughout the 1960s and 1970s, artists were redefining the role of the viewer. LeWitt and many of his contemporaries operated on the premise that the artist cannot and should not control how the viewer perceives the art object; they believed that there is significance in the variation of the viewers' interpretations. Rather than an abdication of responsibility on the part of the artists, this notion was born of an egalitarian spirit: who is the artist to say what interpretation is correct? The viewer was thus asked—and trusted—to bring their thoughts and creative analysis to the act of viewing, resulting in an active, dialogical experience. In 1967, LeWitt wrote: "Ideas cannot be owned. They belong to whomever understands them."³ In this statement, LeWitt breaks down the notion of the artist as untouchable: Not only are ideas central to artmaking, but they also should be accessible to everyone.

3 Andrea Miller-Keller, "Excerpts from a Correspondence," p. 22.

MINIMALIST ART

The linear, primary forms that are the hallmark of LeWitt's early work could be described as **minimalist**. In brief, minimalist art refers to work that is pared down to the most fundamental forms, is flat or devoid of emotion, is often made in series or as repeated units, and is usually rendered using industrial or pre-fabricated materials. Artists began working with these forms and materials as a means to break from previous styles, namely Abstract Expressionism and Pop Art, which they felt were too commercial and focused on the artist rather than the art. Critic and scholar Susan Sontag wrote in an influential essay, "Ours is a culture based on excess, on overproduction; the result is a steady loss of sharpness in our sensory experience....What is important now is to recover our senses. We must learn to *see* more, to *hear* more, to *feel* more.... Our task is to cut back content so that we can see the thing at all."⁴ To this extent, artists such as Donald Judd, Dan Flavin, Robert Morris, and Carl Andre used simple, geometric forms so that the viewer could see more. For example, Donald Judd used slick, monochromatic, industrial materials to make identical boxlike structures that sat, without pedestals, on the floor of the gallery. Minimalist art took deep root in the American art world and has had a strong influence on art of the past 50 years.

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LeWitt allowed viewers to see more by granting them visual access into his artistic process. In *Lines From the Word "Art"*, 1972 (fig. 4), he used an excerpt from an article about art, circled each instance of the word "art," and drew red lines between the circled words. Blue and green lines originate at the corners of the paper and intersect across the page, creating a geometric web. At the bottom on the drawing, LeWitt inscribed, "Blue lines to 4 corners, green lines to 4 sides, and red lines between the words." These written directives further elucidate the visual logic behind this simple system. LeWitt's decision to reveal these written rules offers the viewer unique insight into an artwork: Although the viewer can no longer see the artist's hand or technical abilities, they are granted access into his mind.

Over time LeWitt explored beyond his geometric roots and incorporated squiggly lines, complex and amorphous forms, and bright and earth-toned colors into his drawing, gouaches (a kind of dense, bright watercolor), three-dimensional structures, and wall drawings. The wall drawing on view at WCMA, *Wall Drawing #959: Uneven Bands from the Upper Right Corner* (fig. 4), showcases these vivid colors. The piece, installed at WCMA in 2001 with

4 Susan Sontag, "Against Interpretation," (1964), referenced in David Joselit, *American Art Since 1945*, p. 108.

the assistance of LeWitt's assistants and Williams College undergraduate students, connects the four floors of Lawrence Hall through bands of rainbow colors. The simple system, bands of color starting from the upper right corner of the wall and widening as they descend, unites the space and is a playful, colorful addition to a busy college teaching museum.

ARTISTIC COLLABORATIONS

In 1968, LeWitt made his first “wall drawing,” in which he and two assistants took one of his systems explored in a drawing and expressed it directly on the wall of the Paula Cooper Gallery in New York. This scenario—an idea formulated by LeWitt and a subsequent wall drawing executed by assistants—formed the backbone of much of LeWitt's artistic process. Between his first wall drawing in 1968 and the time of his death in 2007, he created over 1200 wall drawings that were installed all over the world. When a museum or individual purchases a wall drawing they receive a written certificate outlining the instructions for the piece. For example, the instructions for *Wall Drawing #46*, 1970, currently on view at MassMoCA read: “Vertical lines, not straight, not touching, covering the wall evenly.”⁵ Trained assistants travel the world working with local artists, and often students, to install these wall drawings. Although the finished products are amazing in and of themselves, the art of the project also lies in both the initial concept and the artistic process: accomplished and young artists working together to create something new.

The participatory nature of LeWitt's work is a natural outgrowth of the egalitarian nature of minimalist and conceptual art as well as of LeWitt's exceptionally generous spirit. LeWitt fostered and supported many of his peers and younger artists through artist's trades (exchanging art). Lisa Corrin, Director of WCMA, wrote: “Sol traded his work with hundreds of artists. Collecting their art was a way of connecting the dots between his aesthetic preoccupations, those of his contemporaries, and those of a younger generation of artists.” The LeWitt Collection, from which **The ABCDs of Sol LeWitt** is drawn, houses over 10,000 works of art by LeWitt and his fellow artists.

5 For more information on *Wall Drawing #46*, visit: <http://massmoca.org/lewitt/walldrawing.php?id=46>

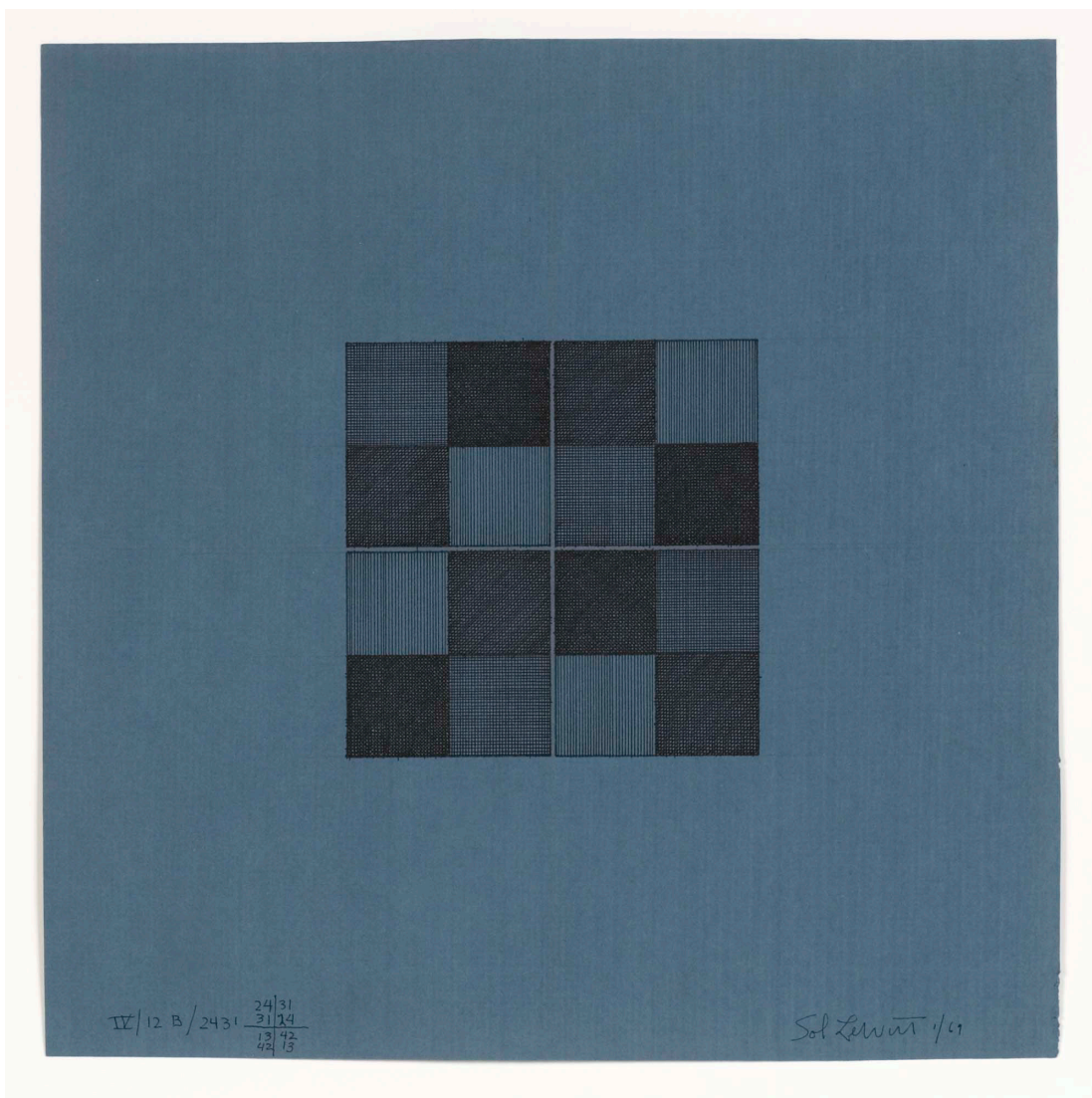


Fig. 1
 Sol LeWitt (American, 1928–2007)
Drawing Series IV/12 B/2431, 1969
 Ink on blue paper
 11.25 x 11.25 in.
 The LeWitt Collection, Chester, CT

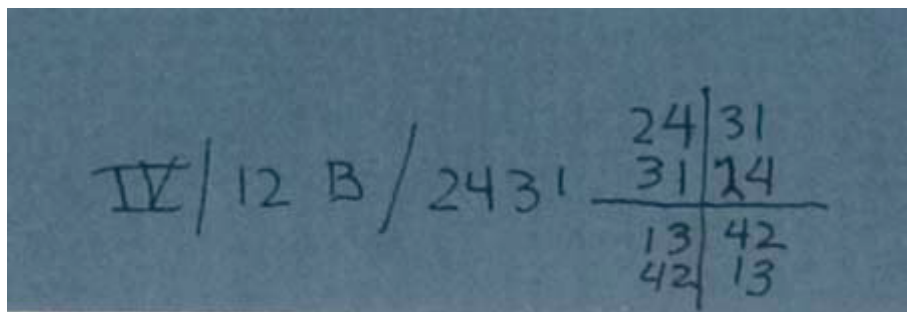


Fig. 2 Drawing Series detail: title and “key”

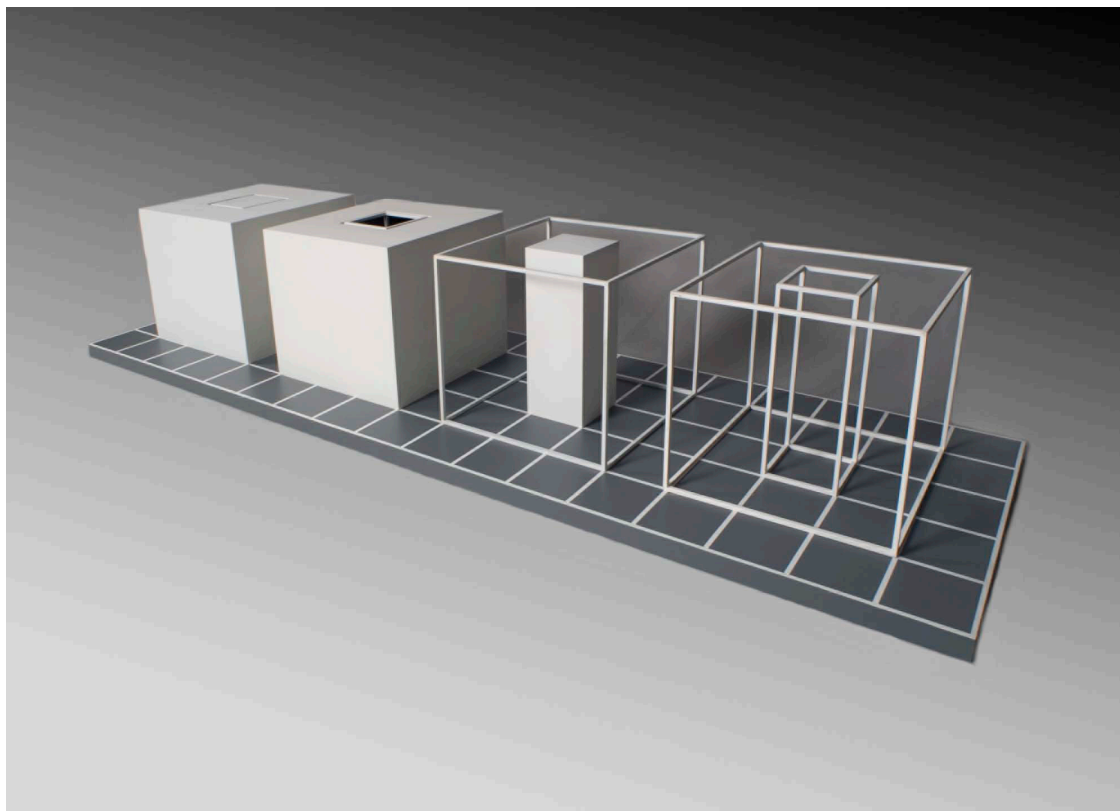


Fig 3.
Sol LeWitt (American, 1928–2007)
ABCD 9 (Row), 1966, refabricated 1994
Painted steel. Platform and nine elements
20.375 x 102.25 x 30.5 in.
The LeWitt Collection, Chester, CT

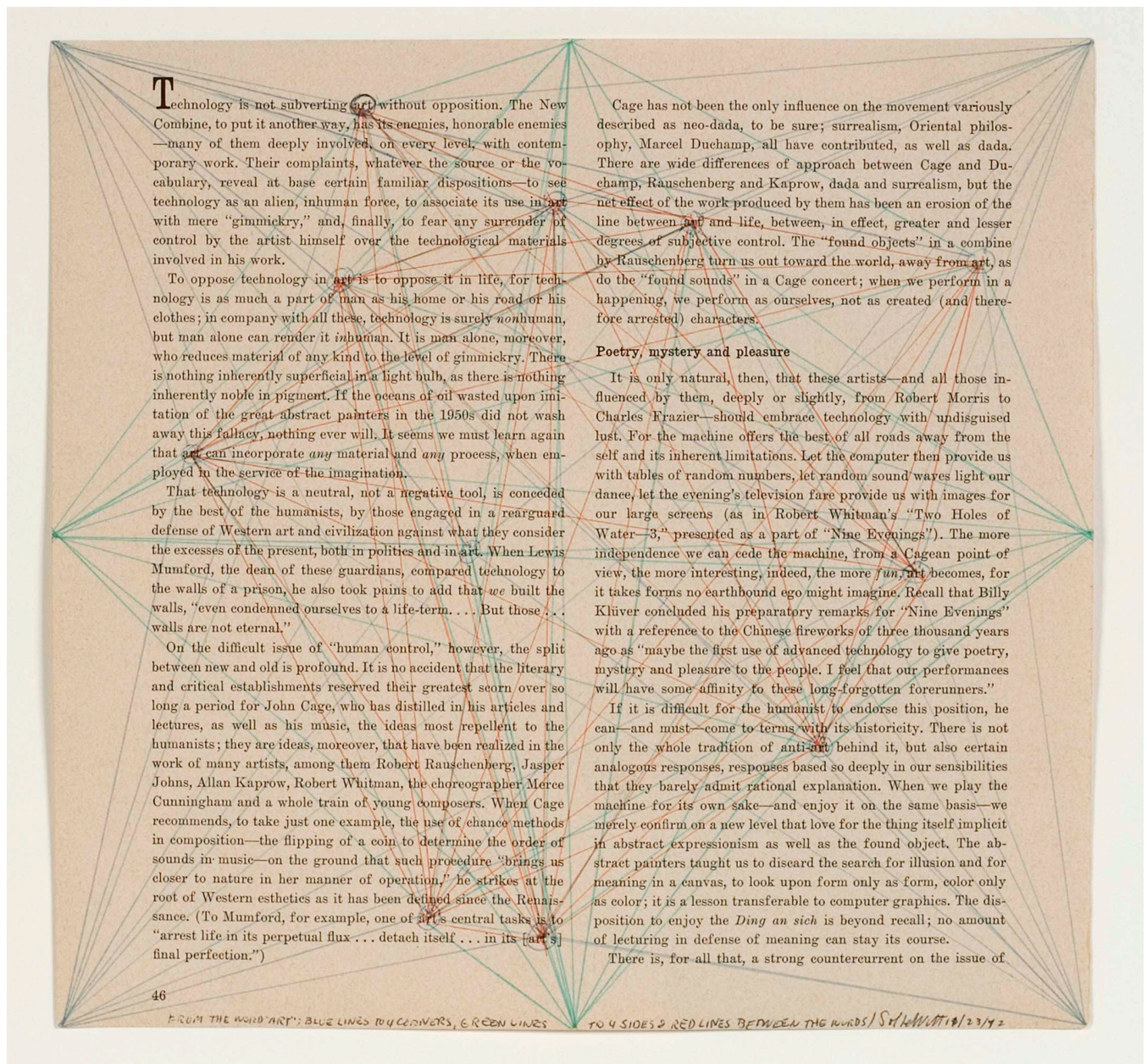


Fig. 4
 Sol LeWitt (American, 1928–2007)
Lines From the Word "Art": Blue Lines to Four Corners, Green Lines to Four Sides and Red Lines Between the Words "Art" On the Printed Page, 1972
 Colored ink and pencil on paper
 8.5 x 9 in.
 The LeWitt Collection, Chester, CT



Fig. 5
Sol LeWitt (American, 1928–2007)
Wall Drawing #959: Uneven Bands from the Upper Right Corner, installed 2001
Courtesy of the estate of the artist

MAKING CONNECTIONS

Following are some guidelines for making curriculum connections between the exhibition and specific subjects. To illustrate how activities can meet standards, we have included examples from the Massachusetts State Standards. Educators who would like help working with standards for these or other activities are welcome to contact us.

VISUAL ART

Tours of **The ABCDS of Sol LeWitt** will showcase a wide range of Sol LeWitt's work from his writings, drawings, and sculptures that are called "primary forms" and "complex structures." Students will make connections between these works and examine how LeWitt used this variety of media to explore his ideas (Massachusetts General Visual Art Standard 3: Observation, Abstraction, Invention, and Expression). Students will be introduced to the terms *conceptual art* and *minimalist art* and learn how LeWitt utilized and adapted these styles in his work.

The artmaking activity during the museum visit and the pre- and post-visit activities explore LeWitt's visual vocabulary—primary forms, lines, pattern, and color—and how these formal elements relate to conceptual and minimalist art (Standard 1: Methods, Materials, and Techniques, Standard 2: Elements and Principles of Design). Activities mimic approaches used by LeWitt as a means to investigate his conceptual process (Standard 4: Drafting, Revising, and Exhibiting). Lastly, students will learn about Sol LeWitt's biography, legacy, and the unique collaborative manner in which he worked (Standard 7: Roles of Artists in Communities).

ENGLISH/LANGUAGE ARTS

Tours of **The ABCDS of Sol LeWitt** will feature rare documents and writings by Sol LeWitt. Students will learn how LeWitt rooted his artmaking process in language and discover how artists can use writing to articulate and clarify their ideas. LeWitt's writings are rich in many ways—poetically, formally, as instructions, and as credos. Students will discuss how simple texts can express such a range of meaning.

Pre- and post-visit activities will use writing as a means to communicate instructions (Massachusetts General English/Language Arts Standard 8: Understanding a Text, Standard 13: Nonfiction, Standard 19: Language). Students will also work collaboratively as a class and in small groups to exercise logical reasoning skills. In these discussions they will use language descriptively and clearly to express their ideas (Standard 2: Questioning, Listening, and Contributing).

MATHEMATICS

Tours of **The ABCDS of Sol LeWitt** will explore the mathematical underpinnings of Sol LeWitt's art. In his *Drawing Series* works, he used line, pattern, and geometric shapes in systematic combinations to follow a concept from idea to realization. Post-visit activities will allow students to use the *Drawing Series* as the basis to explore the connection between mathematical principles and expressions (Massachusetts Mathematics General Strand: Patterns, Relations, and Algebra). Logical reasoning puzzles will allow for further access into LeWitt's artistic process. Post-visit activities will also explore how LeWitt translated his visual vocabulary from two- to three-dimensional works—squares to cubes, triangles to pyramids (General Strand: Geometry).

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STANDARDS

The following chart presents examples of standards that relate to the material and activities covered in tour of **The ABCDs of Sol LeWitt**. Pre- and Post-Visit Activities list the identification number of the standards outlined below.

VISUAL ARTS STANDARDS

- 1: Methods, Materials, and Techniques. Students will demonstrate knowledge of the methods, materials, and techniques unique to the visual arts.
- 2: Elements and Principles of Design. Students will demonstrate knowledge

of the elements and principles of design.

- 3: Observation, Abstraction, Invention, and Expression. Students will demonstrate their powers of observation, abstraction, invention, and expression in a variety of media, materials, and techniques.
- 4: Drafting, Revising, and Exhibiting. Students will demonstrate knowledge of the processes of creating and exhibiting artwork: drafts, critique, self-assessment, refinement, and exhibit preparation.
- 7: Roles of Artists in Communities. Students will describe the roles of artists, patrons, cultural organizations, and arts institutions in societies of the past and present.

ENGLISH/LANGUAGE ARTS

- 2: Questioning, Listening, and Contributing. Students will pose questions, listen to the ideas of others, and contribute their own information or ideas in group discussions or interviews in order to acquire new knowledge.
- 8: Understanding a Text. Students will identify the basic facts and main ideas in a text and use them as the basis for interpretation.
- 13: Nonfiction. Students will identify, analyze, and apply knowledge of the purpose, structure, and elements of nonfiction or informational materials and provide evidence from the text to support their understanding.
- 19: Writing. Students will write with a clear focus, coherent organization, and sufficient detail.

MATHEMATICS

General Strand: Patterns, Relations, and Algebra

General Strand: Geometry

PRE-VISIT ACTIVITIES

GOALS

- To prepare students for the museum visit and any curriculum connections
- To introduce students to the work of Sol LeWitt
- To introduce students to the terms *conceptual art* and *minimal art*

AGE/CLASS LEVEL

The first two activities in this section can be adapted for elementary, middle, and high school levels. The Storytime activity is designed for early elementary levels.

PREPARING FOR THE MUSEUM VISIT

Tours will focus on Sol LeWitt's art, writing, and creative process. Please let us know ahead of time of any curricular connections you'd like us to address during your visit.

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OBJECTIVES

- To prepare students for the museum visit and any curriculum connections

STANDARDS

- Visual Arts: 3, 7
- English Language Arts: 2

PREPARATION AND DISCUSSION

- Review the description of the exhibition and background material.
- Consider the possible curriculum connections and provide your students with relevant background before your visit.
- Inform students about what they will see and do at the museum.

- Remind them how to conduct themselves in the museum (see confirmation letter).
- Let students know that they will view and discuss artwork by Sol LeWitt and make their own projects based on his art.

GENERAL QUESTIONS

- What is art?
- Can art just be an idea? How?
- What else can art be?
- Does the artist have to make his own work? Is it still art if someone else makes it?
- Sol LeWitt once said, “The idea becomes a machine that makes the art.” What might he have meant by this? Can an idea be a machine? Can a machine make art?
- Do you usually have an idea in mind when you begin an art project? What is the first thing you do when you begin a project? Can you imagine what the project is going to look like before you make it? Do you stick with your original idea or does it change as you work? The steps you go through from an idea to a finished project are called your “artistic process.”
- Sol LeWitt worked in a style called conceptual art. What do you think this term means? What kind of art would a conceptual artist make? What kind of artistic process would they have?
- Sol LeWitt’s art can also be described as minimalist. What do you think this term means? What kind of art would a minimalist artist make? What kinds of artistic choices would the artist make (e.g., in materials)?

CLOSE LOOKING: DRAWING SERIES

In this activity, you will use an image from the exhibition and pose questions to engage students in a discussion about Sol LeWitt’s art. This discussion will familiarize students with the close looking and visual thinking strategies that they will use during the museum visit.

OBJECTIVES

- To introduce students to one of the drawings they will see during the museum visit
- To familiarize students with the ideas of series and conceptual art

STANDARDS

- Visual Arts: 1, 2, 3
- English Language Arts: 13, 19
- Mathematics: Patterns, Relations, and Algebra; Geometry

PREPARATION AND DISCUSSION

- An image of *Drawing Series IV/12 B/2431, 1969* (fig. 1) that students can see well, e.g., on PowerPoint, computer stations, slide projection, posters, or printouts from the Internet for each student. (Some images do have copyright restrictions. If you would like to use the images in any way beyond normal classroom use, please contact us.)

PROCEDURE

Present the image *Drawing Series IV/12 B/2431, 1969* (fig. 1) to your students either as a projection or as a printout. Discuss the image as a class.

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SUGGESTED QUESTIONS:

Allow a process of discovery to take place in your discussion. Try posing the following questions (adapted from the Visual Thinking Strategies method). Paraphrase students' responses, and pose more follow-up questions.

SUBJECT:

- What do you see in this picture?
- Can you describe it more?
- What else do you see?
- What is going on in this picture?
- What information in the picture makes you say that?

ARTISTIC STYLE:

- What kinds of lines do you see?
- What kinds of shapes do you see?
- How has LeWitt composed this picture?
- What kinds of patterns can you find? A pattern is something that is repeated or that you see again and again. (There are four types of patterns in this drawing: vertical lines; vertical and horizontal lines; vertical, horizontal and diagonal lines from the left; and vertical, horizontal and diagonal lines from the left and right. The four different types of boxes are repeated in different arrangements in the artwork.)

MEANING:

- What do you think is the idea behind this drawing?
- What steps do you think LeWitt followed in making this artwork? What was his artistic process?
- What does this artwork make you think of?

Suggestion: Pair this discussion with the post-visit activity, 2D Exploration: Drawing Series.

STORYTIME: ALPHABET EXPLORATION

In this activity students will use alphabet picture books as a way to make connections between letters and geometric forms.

OBJECTIVE

- To explore how the artistry of alphabet letters is similar to LeWitt's geometric style

STANDARDS

- Visual Arts: 2
- English/Language Arts: 2

MATERIALS

- Select a book appropriate to your class level. Suggestions are:
 - *The Graphic Alphabet* by David Pelletier, Grades K-2
 - *Museum ABC* by the Metropolitan Museum of Art, New York, Grades K-2

PROCEDURE

1. In this exercise, students will practice the close looking skills that they will use during their museum visit. While reading the book, encourage students to make visual and thematic connections. We suggest adapting the “Whole Book Approach,” pioneered by the Education Department at the Eric Carle Picture Book Museum. Ask questions as you move through the book, starting with the cover illustration: What do you think this book is about? What do you see in this picture? What do you think will happen next? What do you see that makes you say that?
2. These books present alphabet letters as artistic forms. The *Museum ABC* book features grids in a manner akin to LeWitt’s *Drawing Series*. *The Graphic Alphabet* focuses on design and color elements. Many other books of this type could be appropriate for this activity.
3. As you read the book allow students to look closely at the images. Pose questions such as:
 - What colors did the artist choose?
 - What shapes did the artist choose?
 - What do the letters and images have in common?

For more information on the Whole Book Approach visit:

<http://www.picturebookart.org/downloads/Whole%20Book%20Approach%20Final.pdf>

Post-Visit Activities

Goals

- To further explore the fundamental principles of LeWitt's work
- To reinforce concepts introduced during the tour through hands-on art activities
- To use art and writing activities to make curriculum connections

Age/Class Level

Activities in this section can be adapted for elementary, middle, and high school levels.

Logical Reasoning: Fill in the Blank

This activity uses games as a point of entry into the systems and logic behind LeWitt's art.

Objectives

- To understand the logic and patterns in LeWitt's work

Standards

- English Language Arts: 8, 13
- Mathematics: Patterns, Relations, and Algebra

Materials

- Age-appropriate logic puzzles such as number games, Sudoku puzzles, and logical reasoning or pattern recognition exercises. Use the Sudoku worksheets in this guide, puzzles that are part of your math curricula, or Sudoku puzzles from the Internet or newspaper.
- Xerox copies for each student or a large, transposed example on the blackboard.

Procedure

1. Have students discuss their responses to the exhibitions as a group:

1. Discuss as a class how LeWitt's artistic process is similar to a puzzle. LeWitt's process always began by applying simple rules or restrictions to a system. For example, in *ABCD 9 (Row)*, 1966 (fig. 2), he chose two shapes (short and tall boxes) and two formal characteristics (open and closed). Then he made the rule that he would apply each of the characteristics to each shape, and then display all of the possible combinations. Executing one of his concepts is like following the rules of a game.
2. Choose a type of puzzle that is age-appropriate for your class. The Sudoku worksheets in this guide are arranged in increasing order of difficulty.
3. Explain the rules of the puzzle. For example, if you are doing a Sudoku puzzle, explain that the rule is that each number, 1 to 9, can only appear one time in each horizontal row and vertical column. Draw a sample puzzle on the board. Use "if/then" statements to help students grasp the logic of the puzzle. Work as a class to solve the puzzle or do a few examples together until everyone understands the rules.
4. Have students work independently, in small groups, or as a whole class to solve a puzzle or set of puzzles.
5. Use these discoveries to make a connection to hands-on post-visit projects.

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2D Exploration: Drawing Series

This activity investigates LeWitt's artistic process including his use of lines, simple systems, and written instructions.

Objectives

- To build on the **Close Looking: Drawing Series** pre-visit exercise with a hands-on activity
- To explore how variations in line can create patterns
- To practice writing clear instructions that take the project from concept to final product

Standards

- Visual Arts: 2, 4
- English Language Arts: 2, 13, 19
- Mathematics: Patterns, Relations, and Algebra

Materials

- Graph paper, pencils, rulers, journals.
- Images of *Drawing Series IV/12 B/2431*, 1969 (fig. 1) and *Drawing Series IV/12B/2431 detail* (fig. 2) that students can see well, e.g., on PowerPoint, computer stations, slide projection, poster, or printouts from the Internet for each student.

Procedure

1. Begin with a class discussion about the museum visit. Do you remember LeWitt's *Drawing Series* piece? What kinds of lines did LeWitt use? What kinds of patterns did you see in that piece? Draw examples of the different kinds of lines on the blackboard: straight, wavy, horizontal, vertical, diagonal left, diagonal right, etc. This could be called LeWitt's "visual vocabulary." Explain that now it is their turn to make a Drawing Series.
2. Show students figures 1 and 2 from this guide, or for a simpler version, reference the diagram below. Copy the text from figure 2 onto the blackboard. What is the connection between the words and numbers in the detail and the drawing? Explain that this is a key for the combinations of patterns that LeWitt chose for each square of the grid. The number 1 signifies vertical lines and the number 2 signifies vertical and horizontal lines together, and so on. Explain that students are going to use a key to make their Drawing Series.
3. Give each student a sheet of graph paper. Use a ruler and pencil to divide the paper into equal square sections. For younger students, make a 2 x 2 or 4 x 4 grid. For older students, make an 8 x 8 or 16 x 16 grid.
4. Create the key. On a separate sheet of paper, draw a grid and fill in each quadrant with a number from the key on the blackboard. This key will tell you which lines to draw in each quadrant of your Drawing Series. Keep the key a secret!

5. Have students use their secret key to make their Drawing Series. Starting in the upper left corner, draw the lines indicated by the key.
6. Have the students trade drawings and try to figure out their classmate's key. Match the type of line in each square to the letters on the board to crack the code. Trade back and check each other's work. Did you get the logic right?
7. Hang everyone's Drawing Series on a wall to form a huge grid as a class exhibition.
8. Optional application: use the students' work to make a wall drawing. Draw a grid on the wall for each student and have them transpose their work directly onto the wall with pencil. For a less permanent option: draw the grid in chalk on the blackboard and make a "blackboard drawing" instead!
9. Have students write instructions to describe this process. Go back to the first step and recount your artistic process. LeWitt wrote instructions for his projects so that other artists could make them on their own. Use clear language to write your instructions so that another artist could recreate your project!
10. Have students work in pairs to test their instructions. Trade instructions and try to make the drawing. Do the instructions make sense? Work together to edit the instructions.
11. Have students reflect on this experience in a journal entry.
 - For younger students: How did it feel to make all of the decisions about the drawing before you actually drew it? Did you like being able to figure out your classmate's logic?
 - For older students: What are the plusses and minuses of working from a conceptual system such as this? Of working with the restrictions placed by the Drawing Series? Why?

STEP 1

Create a system like this on the blackboard:

1 = |
2 = —
3 = /
4 = \

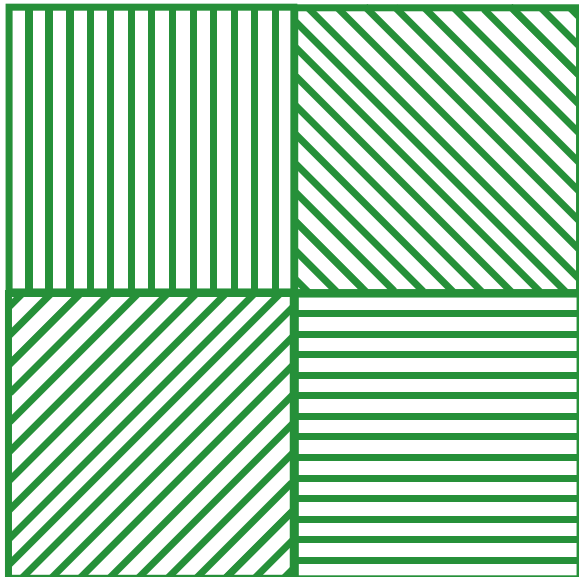
STEP 2

Each student makes their own key:

1	4
3	2

STEP 3

With the key above, their Drawing Series would look like this:



2D Exploration: Lines from the Word “Art”

This project allows students to recreate LeWitt’s *Lines from the Word “Art”* project and extend the concept of serial art to poetry.

Objectives

- To further explore the artistic logic of LeWitt’s *Lines from the Word “Art”*
- To learn about serial art
- To make connections between art and writing

Standards

- Visual Arts: 2, 3, 4
- English Language Arts: 8, 19

Procedure

Part 1: Line art

1. Discuss LeWitt’s artwork *Lines from the Word “Art”* seen during the museum visit. You might also use the figure in this guide to refresh their recollection. Ask students how they respond to the artwork. How did LeWitt make it? Can you describe his artistic process? Explain that students are going to make their own artwork with lines and words.
2. Distribute Xerox copies of a written text or texts. Ask students to read the text and circle words that appeal to them. They should circle a variety of words for the purposes of this project.
3. Create a few simple rules to transform this page with circled words into an artwork. In his project, LeWitt’s rules were: blue lines from the corners, green lines from the sides, and red lines to connect the circled words. Ask students to choose three colors and make up a rule for each color. Have them write the rules at the bottom of the page.

4. Use colored pencils and rulers to create the project.
5. Display your art around the classroom. Find the visual similarities and differences between students' artwork. Reflect on the project as a class.

Part 2: Word art

1. On a separate piece of paper, make a list of all of the circled words. Use these words to make a found poem—a poem made from pre-existing text.
2. Play around with the order of the words. Use line breaks, punctuation, spacing, and pattern to make the words form a poem. Use only the words that were circled!
3. Repeat this process. Use the same words in different combinations to make a poem series.
4. Make a total of three poems out of the same words.
5. Have students read their poem series aloud and notice the differences between their three works. How did their choice of word order affect the meaning and feeling of the poem? Are there any two poems in the class that are quite similar to one another? Which two are the most different? Reflect on the project as a class.
6. Have students reflect on this process in a journal entry.
 - For younger students: How did it feel to make a poem series? Can you describe your artistic process?
 - For older students: How is a poem series like conceptual art? How is it like minimalist art?

3D Exploration: Incomplete Open Cube

This activity allows students to explore the physical and conceptual nature of the cube in two- and three-dimensional media.

Objectives

- To learn about the nature of LeWitt's favorite shape: the cube!
- To explore how 3D shapes can be altered through small changes

Standards

- Visual Arts: 2, 3
- Mathematics: Geometry

Materials

- Either Tinker toys (sticks and wooden spools) OR popsicle sticks and Styrofoam cubes or marshmallows
- Graph paper and pencils
- Images of Sol LeWitt's *Incomplete Open Cube* structures (images can be found by Googling: "Sol LeWitt incomplete open cube") that students can see well, e.g., on PowerPoint, computer stations, slide projection, poster, printouts from the Internet for each student

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Procedure

1. Begin by drawing a cube on the blackboard. Ask students: how many sides make up a cube? What shapes make up a cube? Slightly trickier, how many edges are there on each cube? Answer: 12.
2. Give each student 12 tinker toys sticks and 8 wooden spools, or 12 popsicle sticks and 8 marshmallows. Ask them to use these tools to make a cube.
3. Have them draw their cube on a sheet of graph paper.
4. Next ask them to think of what else they could do with their cube. Have them manipulate their cube to create "incomplete open cubes." Start by

removing just one or two edge pieces

5. Draw each variation on the graph paper.
6. Project or share images of Sol LeWitt's *Incomplete Open Cubes*. Ask students to make their cube look like one of Sol LeWitt's structures. Draw this cube on the graph paper. Repeat as desired.
7. Ask students to figure out what is the minimum number of sides that their structure needs to have before it no longer resembles a cube. Have them draw the variations on the graph paper as they work.
8. Extra credit: how many possible variations are there for an *Incomplete Cube*?

3D Exploration: Collaborative Serial Project

This activity allows students to work collaboratively in small groups to create a three-dimensional Serial Project.

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Objectives

- To further explore the connection between two- and three-dimensional forms
- To write clear instructions that take the project from concept to final product

Standards

- Visual Arts: 2, 4, 7
- English Language Arts: 2, 13, 19
- Mathematics: Patterns, Relations, and Algebra

Materials

- One copy of the Collaborative Serial Project Worksheet for each student, graph paper, pencils, rulers, large paper or poster board, black markers,

boxes, paper towel tubes, paint (optional), and journals

Procedure

Part 1: Concept

1. Using the same process as the **2D Exploration: Drawing Series** exercise, brainstorm ideas for your “visual vocabulary” on the blackboard. Each student will need to choose one geometric shape (e.g., a cube, box, sphere, cylinder, pyramid, etc.) and two sets of characteristics (e.g., pattern, color, and size) from which they will choose two variations. For example, if they have chosen size and color, they will identify two variations for size (e.g., short, tall) and two variations for colors (black and white).
2. Brainstorm ideas for shapes and characteristics as a class and write or draw the ideas on the blackboard.
3. Distribute the Collaborative Serial Project Worksheet to the class. Have students use the worksheet to choose one shape and four characteristics for their project.
4. Have students mix the characteristics in different combinations to make their key. In the above example, their key would be: black and short, white and short, black and tall, white and tall.
5. Following the combinations detailed in the key, students should sketch out the plan for their Serial Project on their worksheet.

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Part 2: 3D Structure

1. Divide the class into small groups. Have each group choose one of the student’s plans for a Serial Project to make in 3D. They can change the plan slightly if desired.
2. Each group should collect four 3D objects that match the four shapes in their drawing. For example, if a group chose short and tall cylinders, they could use two toilet paper tubes and two paper towel tubes.
3. Have students work in their groups to make their Serial Projects come to

life. Using the drawing of their Serial Project, make each 3D object match the object in your drawing. Use paint, markers, and scissors to make the necessary alterations to your objects.

4. Each group will need one large poster board or large sheet of paper. Have them outline a large 1x4 grid. Each square should be large enough to hold one of the 3D objects.
5. Use the key to place the objects in the correct squares of the grid.
6. Hand out graph paper and pencils. Have students work in their groups to figure out the logic behind another group's Serial Project. What kinds of characteristics did they choose? How did they combine the characteristics to make their key? Trade back and check each others work. Did you get the logic right?
7. Turn your Serial Projects into an art exhibition! Present them in a public place in your school. Have a contest to see if other classes can crack the codes!
8. Have students write instructions to describe this process. They can work individually or in their small groups. Have them go back to the first step and recount the artistic process. LeWitt wrote instructions for his projects so that other artists could make them on their own. Use clear language to write your instructions so that another artist could recreate your project!
9. Have students reflect on this experience in a journal entry.
 - For younger students: How did it feel to work as a collaborative group to make your Serial Project? How would it have been different if you had worked by yourself?
 - For older students: What are the plusses and minuses of working collaboratively? How does working collaboratively affect the artistic process? How would it have been different if you had worked by yourself?

Collaborative Serial Project Worksheet

Choose one shape: _____

Choose two characteristics (e.g.: pattern, size, color):

A.

B.

Choose two variations for each characteristic (e.g.: straight, wavy, small, large):

1.

1.

2.

2.

Combine the characteristics in different combinations to make your key:

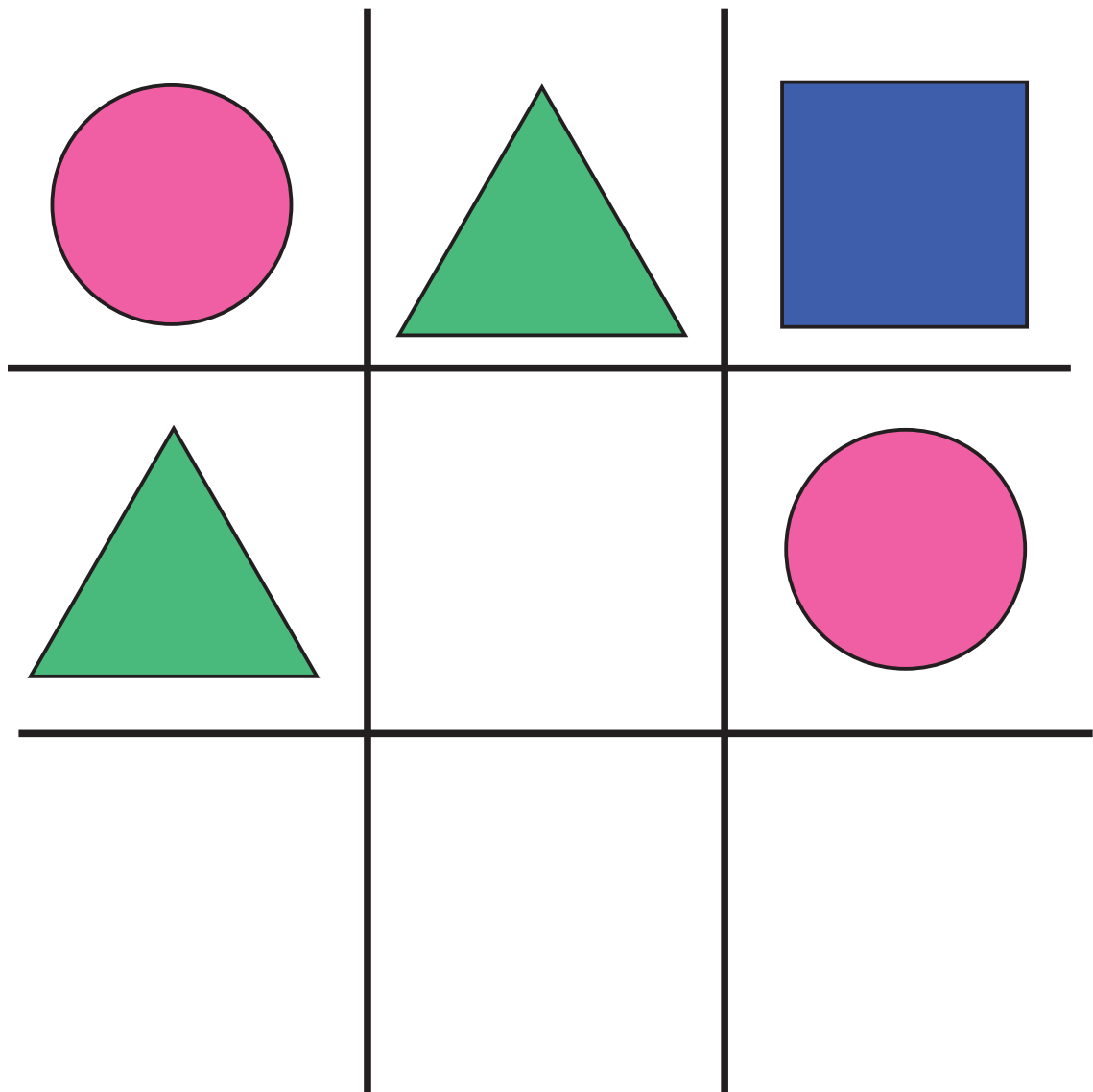
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Sketch your Serial Project:

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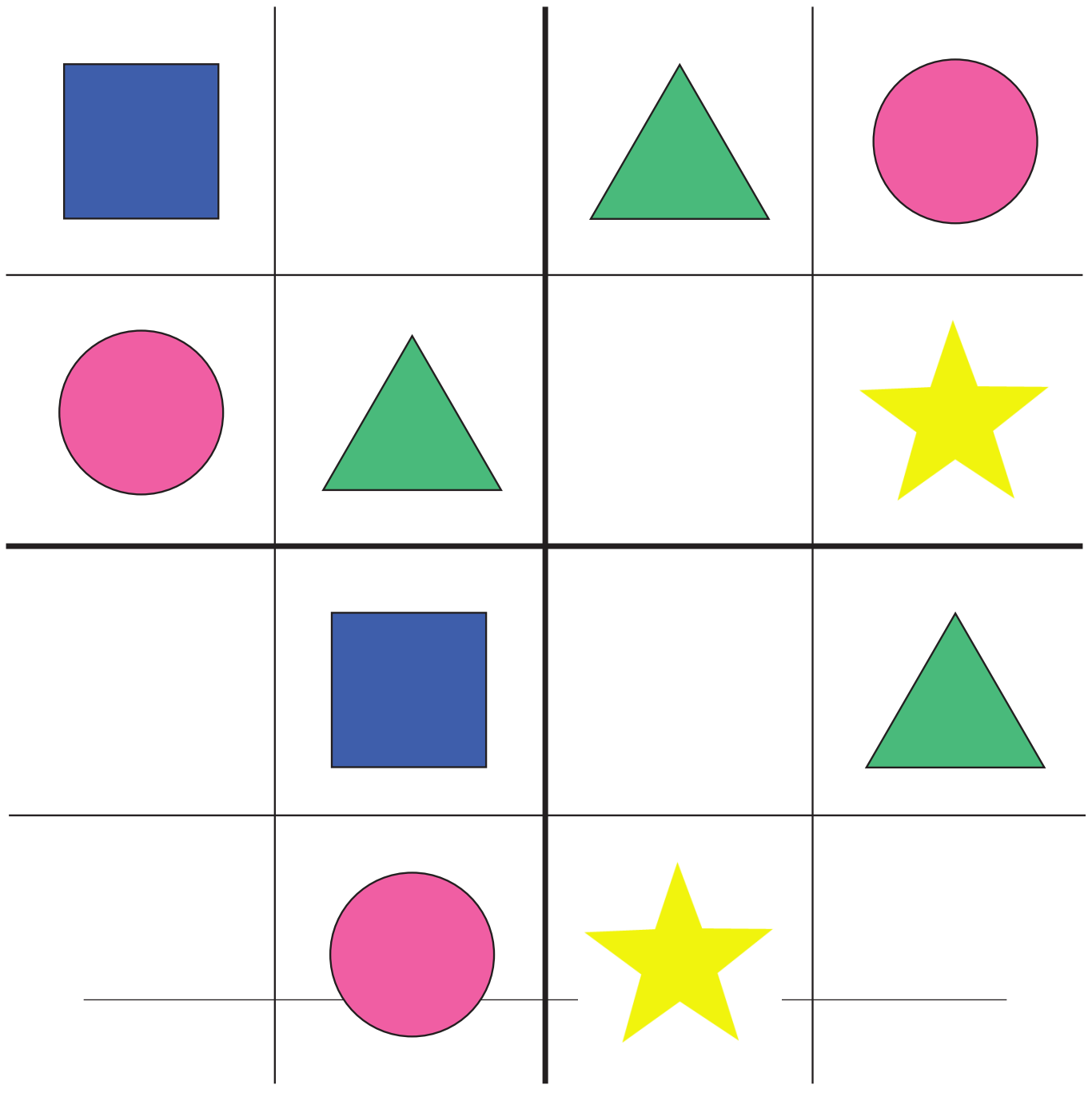
Sudoku Worksheet #1

- Each column and row should have one (and only one!) circle, triangle, and square.
- This grid has four blank boxes. Which shape goes in which box?
- Fill in the blanks to finish the grid!



Sudoku Worksheet #2

- Each column and row should have one (and only one!) circle, triangle, star, and square.
- This grid has six blank boxes. Which shape goes in which box?
- Fill in the blanks to finish the grid!



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Sudoku Worksheet #3

- Every number from 1 to 5 should appear in each column and row once (and only once!).
- Use the process of elimination to figure out which number goes in which box.
- Fill in the blanks to finish the grid!

1	2	3	4	5
	4	1		2
2				
4			1	
5	3			1

Recommended Resources

Books

Nicholas Baume, Ed. *Sol Lewitt: Incomplete Open Cubes*. Wadsworth Atheneum Museum of Art. MIT Press: Cambridge, Mass, 2001.

Gary Garrels, Ed. *Sol LeWitt : A Retrospective*. San Francisco Museum of Modern Art. Yale University Press: New Haven, 2000.

David Joselit. *American Art Since 1945*. Thames & Hudson: London, 2003.

LeWitt x 2. Madison Museum of Contemporary Art: Madison, WI, 2006.

Websites

Williams College Museum of Art

<http://www.wcma.org/modules/LeWitt/>

MASS MoCA

<http://www.massmoca.org/lewitt>

National Gallery of Art Classroom: Art Since 1950

<http://www.nga.gov/education/classroom/>

Education Programs

At the Williams College Museum of Art, our Education Programs strive to instill in visitors a love of art and an appreciation for all that a museum can offer.

As a teaching museum, we are committed to finding innovative approaches to teaching and learning through art—making connections across disciplines, building literacy skills, and encouraging the exchange of ideas.

Our programs engage participants in active experiences with art and investigate art history, artistic practices, and the issues that artwork raises. We are always available to discuss ways to tailor our programs and provide support to help you make the most out of your experience with us.

Education programs at the Williams College Museum of Art are made possible by the Eugénie Prendergast Trust.

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