USING SEQUENCED ART LESSONS
FOR VISUAL PROBLEM SOLVING

MASTER'S PROJECT

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by

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Official Advisor
Dedicated to Mike, Emily and Mike.

Your patience and understanding helped us all to learn.

Special thanks to the fourth, fifth and sixth grade students at Horace Mann Montessori School.
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CHAPTER I

INTRODUCTION

The Problem

This study will show that sequential, in-depth instruction about spatial concepts can help children learn how people have manipulated space to their own design in history, literature and artistic expression. Furthermore, this spatial awareness will help students find creative, satisfying solutions that bolster self-esteem and help them understand their environment when using personal and artistic space.

Background of the Problem

When students reach the fifth and sixth grade, they tend to become more aware of the personal space around them. This is the space that they perform their daily tasks in. Teachers may increase this awareness by encouraging students not to copy or allow others to copy from their work. As students' bodies grow, the space they physically occupy increases, moving them closer to each other in the classroom.
This is the time of life when hygiene begins to dominate much of their thought and students become physically aware of their bodies in relationship to others. In this instructor's experience, it is also during this period when peer acceptance and the need to be "one of the crowd" becomes psychologically important to the students.

While all of these things seem like natural, healthy changes children go through as adolescence approaches, they also can cause obstructions to learning. In the art classroom, fear of peer disapproval often causes some students of this age to copy teacher samples, denying their own creative instincts. They may continually make mistakes, erase and start over or get new materials and, in effect, never create any product that could cause negative criticism either from other students or the teacher. This lack of self-confidence blocks creative activity and progression. The resulting poor classroom attitude often manifests itself through lack of self-control and subsequent disciplinary problems.

The question then is how can the art educator allow as much student freedom as possible and still create an environment where the student feels safe to voluntarily share creative expression with other
students and with the teacher?

In *Teaching as Story Telling*, Kieran Egan (1989) recommends that "new knowledge be organized in terms of the basic, usually binary conceptual tools which children have in place." Therefore, children already have limited knowledge of their personal space in proximity to others. New knowledge of this basic concept of space can be organized in such a way that students gain ownership of their space and thus, freedom to use personal space for creative expression. Consequently, students can learn about their own spatial relationships to express themselves and to create aesthetic space in works of art. This gained knowledge can change student attitudes about personal space, empowering students to use self-expression, dispel self-doubt and increase self-esteem. As this happens, classroom discipline will be minimized because students will be actively creating and understanding aesthetic objects, that is, the work of art perceived as a work of art (Greene 1986).

How to make creative individuals is not a new educational question. Historians help us remember what we have forgotten and give us ideas for selective revival of neglected practices (NAEA 1972). As far back as the 1880s *The Child Study Movement*, begun by
G. Stanley Hall, liberated art curriculums by holding the child's mental and physical developments as main concerns (Pappas 1971).

Now, as the twenty-first century approaches there is an immediacy which is prevalent in society. Drive-through restaurants, transportation innovations and the "global village" the media presents are only a few examples of how today's children are growing up in a service oriented world. The speed and efficiency of their environment benefits children to the point where it is easily taken for granted. Although it is difficult to acknowledge, youngsters are not only unmotivated by traditional schooling but seem extremely self-centered and unconcerned with what is around them (Woodward, 1990).

June King McFee (1977) asserted that when we don't like our environment we gain personal order from ignoring it, therefore, many people don't know what pleases them. Art education must help students become aware of how interdependent we are in the environment to which we are all contributors. Art can help students modify their environment to suit their values by teaching them how visual elements interact with each other.

The way a child uses space at the artroom table
affects the use of space by all. When we teach students to see this in life situations and to think of interrelationships, they find workable solutions in their art and in their life (McFee and Degge 1977).

Contemporary painter Frank Stella in his 1986 Harvard Lecture Series stated that "The aim of art is to create space- space that is not compromised by decoration or illustration, space in which the subjects of painting can live." He also pointed out that historically the Renaissance freed painting from architecture and the artist became more artist than craftsman, more of an individual professional rather than an artist dependent on the building crafts to make art. According to Stella, artist Caravaggio fully perfected the use of independent artistic space and, later, Rubens fully took charge of his artistic space by basing his paintings on enlargements of the artist's imagination rather than the recording of significant events. Therefore, in history, spatial concepts have matured over time freeing artists to use artistic space as a place for self-expression with increasing freedom from peer guidelines.
Outline of the Problem

The scope of this project will focus on a sequential in-depth study of spatial concepts in an art unit for fifth and sixth grade students. Enough new knowledge will be imparted to students about personal use of space to generate confidence and self-esteem in their own use of artistic space as measured by using a portfolio designed assessment.

Few will argue that students learn more about a topic from in-depth study, but such intensive learning can also be measured in less academic ways by evaluating changes in student behavior and whether knowledge gained is helping the students achieve greater insight and use of their sense of value in society. Jerome Bruner said that the construction of lessons need not reflect specific values, but they should present as much information as possible for the student to determine the cause of the place of people in society. This information, in order to further strengthen "expression of democratic values relating to rational criticism", needs to present as many deviations as possible (1966).

This is a good rationale for a sequential learning system that presents one topic from several
viewpoints. In this way the learner is free to develop personal insight and opinions about the subject matter.

Delimitations

Students used in this study are in the first year of implementation within their school of the Montessori Method of education. The art teacher is not Montessori trained and this is the first year that the classes have been grouped into multi-age levels rather than into single grades. Originally this unit was designed for the sixth grade which would have come as one class. During the previous school year, the fifth grade class had many behavioral problems in all classes including art. Several students received poor grades and many letters were sent to parents concerning their child's unacceptable behavior. This sequenced unit was developed with this class in mind. It was not until school began in the fall that the art teacher was made aware that the class structure and school philosophy had changed and the Montessori program would be in place. There are four multi-age level classes with fourth, fifth and sixth graders instead of the one class of sixth graders anticipated
for the study. The fifth graders were included in the study so that the instructor would have larger groups to work with in terms of management in the classroom. It was also felt that the curriculum content, while appropriate for most fifth graders, would be too difficult for fourth graders and that is why the unit was not taught to all students in the classes.

Definitions

Artistic space as used in this study is the working space of the artistic learner. This includes the student's space at the table in the artroom as well as the space in which the artwork develops, such as two-dimensional paper or a three-dimensional box.

Environment is a space to be occupied either in reality or through imagination. The students are familiar with the word from studying effects of pollution in other classes. In this study environment becomes a personal focal point as the student strives to create artistic spaces on an individual level.

Ownership occurs when the student realizes that the
artwork they have produced is an extension of their own identity.

**Personal space** as used in this study is artistic space that the learner has taken as his own as well as the student's space in relationship to others in the room.

**Portfolio** is a collection of all the student's work including sketches and written notes. This collection of work helps both teacher and learner view the sequence of lessons, the relationships of one work to another and the progress made.

Definitions of new vocabulary to be introduced are included in the lesson plans.
In addition to references cited elsewhere in this paper, literature indicates that an in depth-study of artistic space should result in increased personal expression and self-esteem. Maxine Greene (1986) says that persons constitute space. When individuals are free to be personally present to art they learn how to put their energies into the work. They enlarge their perception and the focus of their attention and imaginations "deepen, diversify and expand."

The idea of long-term learning (the unit) is not only useful in the arts but the need crosses the curriculum in all areas. The problem for the educator is how to measure the results of a process over time instead of a final project.

Assessment of student work has traditionally been imposed on children after the assignment is done. Yet our society values free thinking and democratic ideals. These two present conflict within the individual and consequently in our society. This imposition of judgement on an individual's work can create anxiety that will hamper a person's actions
since people will act only on what they perceive as possibilities. Traditional assessment does not take into account the mix of qualities necessary for successful living. These behaviors need to be learned and practiced through the refinement of judgement or making conclusions based on inner processes, and realization of self as a passionate chooser rather than making irrational decisions (Berman, 1986).

Unfortunately, this type of open-ended learning is not measurable in traditional ways. Recognizing the artistic learner as an individual makes standardized evaluation not just impractical but impossible. The nature of testing is to assess broad groups of people in accordance with their knowledge of specific data. This places one person's ability to retain information at odds with another's, thereby making learning a competitive event rather than a search for intrinsic values. Even without the use of multiple choice tests the art educator's evaluation of the student's work is, at best, subjective. It is generally a review of what, in the eyes of the instructor, the student has accomplished in relation to what the teacher believes the child can do. This is somehow set on a scale and given a grade or percentage that measures a final product.
Howard Gardner, head of Harvard's Project Zero and Arts Propel for the Pittsburg Public Schools, feels the experience of exploring a theme in great depth is vanishing in our fast paced society. Yet in-depth study can provide a model of how productive, perceptual and reflective elements which come together in the mature artist can be exhibited by the artistic learner. Children who are hesitant to become involved with materials will do so given structure that provides artistic literacy (Gardner, 1986). Assessing progress in the arts has traditionally been a problem. Gardner feels that using portfolio-centered education may help students focus on their own goals and feelings (1988). To this end, Arts Propel is an attempt to devise an assessment tool which will help to define student progress through a portfolio-based curriculum that would be measurable by some educational standard. Available literature about assessment however, prescribes no specific guidelines for transferring this type of evaluation into traditional scoring. It would seem that one goal of this type of measurement is not to change grading concepts as an indicator of progress but to have students involved in seeing and evaluating the sequence of ideas. In the literature there is much
about the portfolio itself and why it can create accountability, these will be developed here.

Gardner identifies seven different intelligences:

1. Mathematical
2. Linguistic
3. Musical
4. Spatial
5. Bodily-kinesthetic
6. Interpersonal
7. Intrapersonal (Brandt, 1987-88).

All of us have these intelligences to varying degrees. Most schooling concentrates only on the first and second yet each one can be directed toward artistic ends. For instance, spatial intelligence is used by sailors and sculptors, bodily-kinesthetic talents are used by mimes, dancers and surgeons. Even mathematical intelligence has aesthetic merit in the way one proof is presented as more elegant than another (Gardner, 1989).

We can teach to all intelligences by developing sequential curriculum that provides spiral learning in the sense that it revisits concepts and problems in an increasingly sophisticated way. Artistic learning should be carried out over a significant period of time which allows the student opportunity for feedback
and implementation of recently gained knowledge according to personal taste and thought. A single, project-oriented lesson cannot achieve this. There is a need for sequential, sustained units because the arts are deeply personal areas and children need to encounter their own feelings as well as those of others. The lessons need to allow time for exploration and for the child to see personal reflection as an important and respected activity. Gardner (1989) believes that in-depth projects can exert a long-term impact on the learner's competence and understanding.

Focusing on the process of learning rather than the quality of a final project invades unknown territory in the schools. Because artistic learning is not just skill or concept mastery it is important to devise assessment that suits the art form rather than crafting curriculum to suit assessment needs.

In the Arts Propel study lessons are set up as "domain projects." These in-depth studies include perception, production and reflection (1989). Drew Gitomer, another educator involved in the study, says that assessment is the process of making inferences about student learning which have to make attainment of goals important. He defines production, perception
and reflection:

**Production** is central in that perception and reflection are engaged in and around the making of art.

**Perception** are those processes by which one sees and understands an image whether it is their own or someone else's.

**Reflection** is thinking or making decisions about some aspect of the artistic process. It allows for private activity (Gitomer, 1992) and aids in recognition of art ownership.

All works including notes, sketches and finished projects are kept in a portfolio. The collection is a multi-purpose assessment tool. First, it makes the child responsible for the work; they keep everything so that teacher and student can see the process. Secondly, this type of record captures growth of learning over time. It also places an importance on the arts, just as a scientist might keep a longitudinal record of an experiment, the student artist can see the unfolding and maturation of ideas.
in the collection of work because in it lies a biography of an artwork and a range of reflection. From portfolio assessment comes integrity and validity of information (Wolf, 1989).

Through evaluation of the process there is awareness of:

1. Student responsibility
2. A climate of reflection
3. An enlarged view of what has been learned
4. A developmental or long-term point of view.

Additionally, the use of student portfolios in this manner allows teachers to reflect on their own skill and development as instructors (1989).

In most areas children simply improve with age. Gardner (1989) has found, however, that in "artistic spheres" there is a high level of competence in young children followed by a "U-shaped" curve in development during the years of middle childhood, especially in artistic production. It is normal in this period for children to be quite bright in one or two areas yet lag behind in others in art. This is because comprehension lags behind production underscoring the need for learning by doing. A single project could therefore have a very satisfying end product, yet the student might not have a clear idea of how it was
accomplished. By going on to another, unrelated art lesson the student will not connect that prior artwork to the understanding of a concept. However, sequenced lessons allow the child to revisit a set of knowledge over and over again in different ways. They can play on the varied intelligences of the learner and, hence, expand perception in all areas of understanding about a topic.

Children should encounter art objects made by others in relation to artistic problems and products with which they are themselves engaged (1989). When there is more awareness of the content relationships everyone concerned begins to recognize the complexity of what is being thought about (Brandt, 1988). Dennie Palmer Wolf (1989) states that reflective self-evaluation is inseparable from pursuing any kind of worthwhile work. Very little in the way we now assess students encourages lifelong skills. In fact, current evaluation techniques can actually prevent learners from becoming thoughtful respondents to and judges of their own artwork.

Initially students may need to be coaxed and nagged about adding entries to journals or putting failed sketches in portfolios. As they begin to understand the process these personal reflections
become invaluable learning tools.

In the arts individuality and invention are as essential as mastery and learning often occurs in very large chunks spread out over time. Portfolios tap skills that product oriented assessments cannot measure. Wolf concludes that students' abilities to pursue work over time, ask questions and arrive at their own standards occur when they are able to see several pieces chronologically sequenced to record long-term evolution or "macrogenesis" of artistic thinking.

Drew Gitomer (1992) emphasized that human learning's most fundamental concept is that it is an active, constructive process. The content of knowledge is embedded in the process approach. Portfolios allow for a connection of learning experiences. Assessment can come through questioning during the studio activity of younger students or, more directly, questioning in order to evoke written journal responses.

When asked if students are getting anything from Propel experiences and about the documentation of such learning, Howard Gardner replied that there is still much conflict about assessment but what is most important is the "personal meaning and emotional
content" of work which is difficult to assess because it's so subjective. He adds that in Arts Propel evaluation occurs "on the fly" while students are actively engaged in their projects. Production, perception and reflection are monitored together as an artistic activity. The portfolio does, however, create a data base. The number of entries can be measured and it can be noted how detailed these are. Then the quality of reflection can be assessed.

In terms of education in general, Gardner feels what is needed is less emphasis on test scores and more concern for students becoming deeply interested in things and more engaged in wanting to know. Portfolios allow for a broader and more flexible approach to how we assess children (Brandt, 1987-88).

The students in the study described in the body of this paper are in the fifth and sixth grade, aged 10-14. The wide age spread is due to their starting age upon entering school, academic achievement and retention. Portfolio overview is possibly a more accurate way to assess student growth than traditional subjective grading since it allows for the instructor and students to see starting points and the route of progression through the lesson. At the same time it would be unfair to assume that all students at any one
grade level can achieve or be expected to progress equally simply because of age or class level.

Victor Lowenfeld is a twentieth century leader in art educational theory. In his book *Creative and Mental Growth* (1959), he provides the art educator with guidelines to gauge where students are in terms of the maturity level of their artistic expression. The instructor in this study has used Lowenfeld's research results to assist in developing assessment of the unit.

Although there are several levels of artistic development that students pass through from early childhood to adulthood, the two stages that predominate the classes used in the study are the "Gang-Age", from nine to eleven years and the Psuedorealistic Stage- the stage of reasoning, from eleven to thirteen years.

Nine to eleven year old children are beginning to change their concepts about space. "Space, for the child, means the immediate area around him, the area which has significance to him" (1959). This is called the "Gang-Age" because children begin to see themselves as part of a greater whole. Rather than making art in which all emphasis is placed on the relation of object to themselves they become more
flexible in their thinking about themselves in relation to their art environment. As details become more complete a gradual consciousness of their design in relevancy to environment is realized. Lowenfeld states that each adjustment to a new situation implies increased flexibility in thinking and in imagination. The student having difficulty adjusting to changing awareness frequently draws repetitiously or copies.

Beyond this, from eleven to thirteen years, children start to observe visually. The art instructor aids this by shifting attention from the working process to increased emphasis on the final project, helping the students to analyze the visual image. Youngsters are more alert and unconsciously have a realistic approach. They pay greater attention to details that express depth rather than those that identify an object. Characteristics of this age are inclusion of proportion, a horizon line, action and drama, and spatial relationships. Socially the child has the ability to consciously conceive of a social environment. Aesthetically their art space has meaning and design characteristics that relate to that meaning.

Lowenfeld, advising the teacher says,
A child who has difficulty relating objects or figures to the space in which they are represented usually thinks in terms of the figures or objects in isolation. Since it is one of the most important criteria of social growth to possess the ability to cooperate, that is, relate each others' needs to one another, the ability to obtain spatial relationships is an important criterion of social growth (Lowenfeld, p. 249-250, 1959).

Childrens' ability to overlap in their artwork helps them to establish spatial relationships between objects. According to Lowenfeld, a definite lack of cooperation is demonstrated by children who do not establish spatial correlations in the space of their drawings. Overlapping allows youngsters to express realism in their artwork. Realism is defined as an attempt to represent reality as a visual concept. The idea is not to reproduce something in a photographic way since that would be unnatural for the child, but to let the student's natural tendencies demonstrate awareness of changing effects caused by motion, distance, light and atmosphere.

As the student develops realistic tendencies, the
space between ground and sky baselines becomes meaningful. For instance, the tree will overlap the sky because the sky becomes a thing instead of a geometric line at the top of the paper. It becomes important for the child to put things in the right place rather than "folding over" which is used by younger students where direction is determined by the self being at the center of the action and therefore having things upside down and sideways in the picture.

Placing objects in front or behind one another may be represented by changing the size or placement yet still drawing the whole object showing smaller things as higher up on the paper. As spatial awareness increases, the baseline will be used less and objects will be shown wholly or partially to depict placement.

For this study the instructor will basically follow Lowenfeld's developmental and spatial guidelines to evaluate the progress of students regardless of age. It is quite possible that there may be sixth graders who are artistically much younger than their years. Likewise, the guidelines allow for flexibility in assessing the child who is a high achiever or may be more mature artistically.
Lowenfeld's theory of artistic development supports the "U-shaped" curve spoken of by Gardner. That is, students begin to leave behind personal detail in middle years. Lowenfeld explains that these details are left out because of awareness of spatial relationships. The child can no longer add a detail that could be put in when younger because it does not fit on the picture plane. Within the unit lessons there are many ways for students to understand and express spatial relationships.

According to McFee and Degge (1977), art education must help students understand their interdependence on the environment to suit their values through visual elements. Jerome Bruner (1966) says, however, that lessons do not need to reflect specific values.

Thus it is necessary to people to teach as much as could possibly be presented well about the conditions that led Western man to redefine his role from that of subject to that of citizen. But by the same token one should, in the interest of furthering and strengthening the expression of democratic values relating to rational criticism, also present the occasion of great deviation from
democratic ideals from the fall of the Roman Republic to the emergence of modern totalitarianism (Bruner, p. 204, 1966).

While Bruner's quote seems to have little to say about art, the essence is that there is a need to present all sides of the story, all points of view if we are to teach students to be a vital part of society. Educators (Brandt, 1988; Pappas, 1971; Tyler, 1986; Ziegfield, 1954) have advocated this over and over. Lee Schulman of Stanford University points out that a strong liberal arts background is essential for our teachers because content and process are so tightly bound. Historically, John Dewey saw human nature as biological with basic needs to come to terms with the environment, attain equilibrium and grow and according to John A. Campbell, art is the measure of sensitive reaction to our surroundings. Teachers' goals, then, should be to instill values so that students trust and feel good about themselves. This will help them gain confidence and autonomy.

Ralph Smith (1987) in "Excellence in Education" says the goal for education in the arts should be appreciation of excellence for the sake of worthwhile experience. Excellence means striving in contexts in
which children learn to perceive art, understand it historically, appreciate it aesthetically and make and reflect upon it critically. He proposes four methods:

1. Imparting of information
2. Guided problem solving
3. Coaching
4. Sequential learning.

This kind of in-depth teaching will concentrate on process and make production less important and therefore less materialistic. Maxine Greene (1986) says that spaces must be made for this to happen. These spaces could create a certain atmosphere that fosters creative exploration rather than passivity, allowing for the unpredictable and unforeseen.

Part of this project is the creation of a personal space box where just this kind of thing happens. In such spaces the point is not to prescribe or explain but to increase the likelihood of people actively engaging in works of art, moving inside them through acts of imagination and having them be meaningful.

Critic Denis Donoghue (cited in Greene, 1986) wrote:

The arts are on the margin... the margin is the place for those feelings and intuitions
which daily life doesn't have a place for and mostly seem to suppress... the arts can make a space for our intuitions of space... With the arts, people can make a space for themselves and fill it with intimation and freedom of presence (Greene, p.61, 1986).

Evaluating the space created by a student may not be an easy task but it is possible. Students may show signs of analysis in their drawing showing parts instead of a whole as they focus on details. This maturation is also shown when the student stays on task longer (McFee and Degge, 1977).

Most importantly, lessons and subsequent evaluations need to be designed with an attitude for helping instill values that help develop the ability to respond to learning tasks. This will allow children to trust their own judgement and feel good about themselves. In that way the teacher has helped the student gain confidence and a sense of autonomy, making progress toward a hopeful, competent and devoted self-image (Tyler, 1986).
CHAPTER III

PROJECT DESIGN

Introduction

This project will implement and document a unit of nine lesson plans taught to four classes of fifth and sixth graders. The lessons in the unit are designed to teach spatial concepts in a variety of ways. Lessons are sequenced so that ideas taught in one lesson support subsequent lessons. For example, the initial lesson introduces the idea of "house" as a space where something belongs. Throughout the unit, this concept is reviewed as different types of spaces are examined.

Another example of sequencing is begun in lesson three with the instruction of positive and negative space. These types of spaces are used again in lesson five and six. Lesson four concentrates on overlapping in drawing but students use overlapping in every lesson for the rest of the unit.

In this way, children are using spatial knowledge as building blocks that lead to the final project. In lessons seven, eight and nine, the students build
their own personal environment, a space which, because of its construction, no one else may enter without the student artist's permission. This environment is made inside a box that allows only one viewer at a time into the space inside. These are introduced to the students as their own personal spaces where they can move about visually and with imagination. This project allows the student freedom to manipulate materials without peer or teacher criticism because when the box is open, it is impossible to tell if the materials and their arrangement in the space are satisfactory when the lid of the box is closed. What the student sees when viewing the personal space is a complex, ordered, summary of how spatial concepts learned throughout the unit can be used to control personal environment.

The Sample

The subjects used in the project include all of the fifth and sixth grade students at a public Montessori school in a large metropolitan district. These students are in four different classes of fourth, fifth and sixth graders. Two of the classes were taught during the first semester and two classes
during the second.

Unless the student is new to the building this year, all students were taught art last year by the art instructor implementing the unit. However, this is the first year of the Montessori program in the building and the first time students have been grouped in this manner. Since the fourth graders are too young for this unit, they will be taught a different lesson that is not a part of the unit. The instructor is, therefore, teaching two lessons simultaneously to two different groups.

Class periods last 90 minutes.

Assessment

The study will focus on the artistic growth of the child. The students, in addition to creating artwork, will be asked to write comments about projects and answer questions. These will not be graded as to whether or not they are correct or incorrect, but will be used as a tool for the teacher to assess both students and lesson. Because they give insight which may not be available during the normal course of the class period, the writing can be an important gauge of student understanding.
All artwork except three-dimensional pieces will be kept in individual student portfolios. The students will place work in these at the end of each class period. This will help the students understand that all work done during these nine lessons is part of the same theme. When critiquing their work students will also have notes and other pieces available for reference if necessary. The notes that accompany work are particularly helpful for the instructor when looking at portfolios when the students are not in class. Student writing helps the teacher to recall what the child's thought process was during the activity.

For this project, contents of student portfolios, teacher anecdotal notes and observations about student attitude and behavior will be used for assessment. Dr. Mary Zahner's writing, from her observation of the implementation of the unit will also be used. These will be found in the appendix.

Chart 1 in the appendix shows the instructor's estimation of student skills and understanding from assessment of each portfolio.

All of these measure the success of the sequenced unit for the student, the class and the instructor. They are not meant to be transferred into traditional
letter grades.

The results will discuss responses to lessons by students, changes made or needed and general observations that may pertain to the implementation of the unit.
UNIT RATIONALE

Why is it important for students to learn material?

It is important for the students to learn about spatial concepts because we are so affected by the space around us and within us. Understanding where we are in a personal sense often helps people cope with the adversity of their surroundings.

By exploring space from a literary source (book), an historical viewpoint (Stonehenge, stained glass), a formal stance (contour, positive and negative), and how other artists have designed space for personal and artistic expression, the student will gain knowledge of how people can adapt spaces to fulfill personal and aesthetic needs.

The final project, as detailed in the last three lessons, allows for personal expression that is free from peer criticism. The volunteerism that is promoted by requiring permission from the artist to look at each interior space, helps students to share ideas, trust peers and teacher and creates a feeling of self-worth and esteem.

If students are to grow in society, they need a working knowledge of their own creative abilities and confidence in their judgement. The lack of "right or
wrong" in the final project can help attain this.

**AESTHETIC RATIONALE**

The Integration of aesthetics into the unit is accomplished by presenting several directions for the children to follow in the final three lessons. Here they make an artwork that is based solely on their aesthetic response to their own use of the materials they choose. Teacher questioning focuses on guiding students to uncover the basic problems in their own art and solve them in order to meet personal needs. The end of the unit also requires that students recall previous lessons. For example, studying artwork like Stonehenge will help the students gain an understanding of humanity's need for beauty. The glimpse of stained glass and its history will do this as well.

Decision making is an important part of this process. The knowledge of space, as used in this unit, will help the students gain insight about why they like or dislike the artwork unfolding before them. Some of the space will have illusionistic quality, particularly when reflection is used. It may appear that they have created holograms within their
space. The excitement can be just as wonderful for them as that caused by the introduction of perspective, sfumato and even Mannerist techniques must have been to artists of earlier centuries.

The questioning in the unit is designed to allow the children to agree or disagree with the issue at hand depending on their own interpretation of knowledge. In this way, it will help them to develop self-confidence in their work and their own convictions as well as trust in classmates and instructor.
UNIT ABSTRACT

Unit Topic: Personal Spaces
Grade: Five and Six

Brief Description of the Unit:
This unit will enable students to learn about interpersonal and intrapersonal spaces and how the space we occupy effects us.

Three Major References:

Lesson One:
Using the book A House is a House for Me, Students will explore the concept of houses and where thing belong and discuss the relationships of things to one another. What makes them belong? Where do I belong?

Lesson Two: Ancient Structures
Students will explore how people in ancient times created spaces to suit their purposes. ie.- Stonehenge, woodhenges, Chichen Itza, etc.
Lesson Three: Positive and Negative Space

Students will draw a segment from a still life of stacked chairs being careful to draw only the negative space. Drawings are done on colored paper, cut out and glued onto the complementary color creating a positive and negative design of the image drawn by the students.

Lesson Four: Still Life Contour Line Drawing

Students will use contour lines to draw a still life using the method described in Mona Brookes' book, Drawing with Children. By drawing assorted objects the children will demonstrate overlapping and spatial relationships.

Lesson Five: Focus on Artist- Frank Stella: Shaped Canvases

Students will view some of Frank Stella's 1960s shaped canvas paintings to see how the shape of the canvas becomes as important as the work on the canvas. Students will create a shape from paper and use media to unify the total design.

Lesson Six: Focus on Artist- Louise Nevelson

Students will use wood scraps and boxes to create a Nevelson-like composition in a box. They will compare the space used by Nevelson and Stella and determine how the artists used two-dimensional and
three-dimensional aspects in their art.

Lesson Seven: Imagination boxes- Introducing Light and Shadow: The Beginning.

Students will be introduced to light and shadow and their effects on interior space. This lesson focuses on the "how to" of getting light into their boxes, eye coordination, peripheral vision and relative size and space. Students will gain basic knowledge through teacher demonstration and experimentation as they set up their own personal space boxes.

Lesson Eight: Imagination Boxes- Color

Students will view slides of Gothic and contemporary stained glass windows to see how light and color change space. They will also go outside and view their own surroundings through large sheets of cellophane and opaque paper. Students will explore and experiment with various colored materials and how changing colors effect their boxes.

Lesson Nine: Imagination boxes- Reflection

Students will introduce reflective materials into their boxes. This lesson introduces the materials with little instruction so that experimentation will dominate the activity. Students will be questioned and asked to write inner reflections as well.
LESSON PLAN NUMBER ONE

A House is a House for Me

Major Objective:

The students will use teacher guided discussion to express their concept of a house. After a brief discussion, the teacher will read the book *A House is a House For Me*. Students will then use their own ideas or those created during discussion to draw from imagination, a picture of a space that belongs to an object. This will establish the first concept of space to be built on in subsequent lessons. This lesson will also allow the teacher to determine the expression level and artistic ability of the child.

Instructional Resources:

*A House is a House For Me*, by Mary Ann Hoberman

Materials:

pencil

paper

Student Assessment Instruments:

This will be the beginning of the unit portfolio. All work will be kept, including preliminary sketches and failed or unsatisfactory sketches.

The instructor will use Lowenfeld's
guidelines to determine drawing maturity level of the students.

**Vocabulary:**

House—something that serves as a shelter or habitation (For this lesson, also keepers and containers).

**Instructional Action:**

**Motivation:**

Class discussion of the concept of a house. This includes the definition from the students and from the dictionary.

- What is a house?
- What is it?
- Who are they for?

What purpose does it serve?

Then the instructor reads the book *A House is a House For Me*. The discussion continues with teacher guidance allowing as much creative play with book concepts as possible. Questions might include:

- Does the book have a message for us?
- What could be a silly house?
- How does the author's definition of a house differ from the dictionary's?
The teacher will direct the students to draw from imagination an object and its house. As much detail as possible should be included in the drawings. Children will be asked to:

1. begin with the object and work outward to add the house.
2. place near objects first in their drawing. This is backward from what would usually be done.
3. overlap wherever possible to add interest and depth.
4. not draw the ground line, but to let the picture float until it is done. Add the ground last. This way they will eliminate objects sitting on lines.
5. add pattern and texture to their drawings instead of "coloring in" with pencil. This will add interest to the drawing.
6. turn "mistakes" into creative ideas.

Pass out 12X18 manilla drawing paper. Newsprint for sketching ideas will be
available and students will have their own pencils.

**Activity:**

While the students draw, the instructor will circulate around the room encouraging and offering verbal assistance where necessary. Students having difficulty with what to draw will be guided to a solution, as well as encouraged to add details (Brookes, 1986). Students not drawing because of self-consciousness will be reaffirmed that this drawing is not to be graded, but a personal concept that will become and entry in their portfolio.

**Closure:**

During the last ten minutes, while drawing continues, students will be asked how their drawing is like or unlike the concepts of a house in the book. On their drawing or on another piece of paper the children will write comments about their work that the instructor can read or that they may wish to read at a later date.

At the close of class, the students will put their work, pertinent sketches and writing in their portfolios.
LESSON PLAN NUMBER TWO

Ancient Structures

Major Objective:

The students will view different visuals of ancient structures to see how people have used space and architecture as a calendar and, thus, help to record and measure the natural effects of the seasons on their environments. The students will then use wooden blocks and flashlights to construct their own interpretations of these structures. Use of space in this manner allows the student to understand the historical manipulation of space as a useful tool in controlling environment.

Instructional Resources:

Equipment:

opaque projector
overhead projector
slide projector
TV-VCR

Visuals:

slides of Chichén Itzá
picture of "Stonehenge" by Jasper Cropsey
overhead projection sheets of Stonehenge and other structures
VCR tape - "Greedy Humpty Dumpty"

materials:
wooden blocks
flashlights
cardboard
newsprint for written responses

Vocabulary:
1. Stonehenge - famous ancient temple site in Great Britain.
2. Woodhenge - monument to the sun built from wood with a center pole and used as a calendar. (Recalls "Sunwatch" field trip.)
3. Light - source of illumination that allows us to see.
4. Shadow - the image cast by an object which blocks light rays.
4. Space - an area provided for a particular purpose. The area that surrounds an object.

Instructional Action:

Motivation:
The students will view the cartoon "Greedy Humpty Dumpty" to introduce them to an example of how ancient temples influence contemporary thinking. This cartoon satires the temples to the sun, built in ancient Babylon, which became
the biblical "Tower of Babel".

Students will then view and discuss other visual resources with teacher guidance. The discussion questions might include:

- Why was Stonehenge built?
- How are these structures the same?
- How are they different?
- Why were these spaces designed?
- What can we learn from studying how people have used space?
- Why did the ancient people value the sun and the moon?
- What are some ways we use space?
- How do we value light in our society?

Information about the visuals will be given as needed so that students have adequate background for discussion.

Activity:

After the classroom discussion, the students will work in groups of two or three and use wooden blocks and flashlights to create their own "sun structures." These can include scientific diagrams to accompany the works. Students will write a paragraph about their sculpture and include these in their portfolio or collect them for the instructor to read.
During the activity time, students will be asked about their construction and will demonstrate how they work. Large sheets of cardboard will be available for students to see the entire shadow cast by their structure.

**Closure:**

During the last ten minutes, students will dismantle structures, return wooden blocks and flashlights, and complete any writing not yet finished. During this time discussion about what they accomplished will be encouraged. Also addressed will be the question of whether they created artworks since the pieces were not permanent.
LESSON PLAN NUMBER THREE

Positive and Negative Space

**Major Objective:**

The students will explore negative space by drawing the voids in a still life of stacked chairs. By concentrating on the negative space they will become aware of positive space as what is present and negative space as what is not there or the space that encloses an object. Drawings will be done on colored paper and will include only a part of the still life so that a design is created. The student will then cut out the negative space being careful to save it and glue both the positive and negative shapes onto a complimentary sheet of colored paper. This will create a negative and positive image of the same design.

**Instructional Resources:**

**Materials:**

- stacked chairs
- assorted 9X12 and 12X18 construction paper
- pencils
- scissors
- glue
Student Assessment Indicators:
1. Understanding of spatial concept
2. Application of knowledge (drawing)
3. Quality of design
4. Neatness
5. Completion

Vocabulary:
1. Positive space- space which is taken up by an object.
2. Negative space- the space that surrounds an object.
3. Complementary colors- A primary and secondary color that includes all three of the primary colors. i.e.- red/green
4. Void- an empty space.

Instructional Action:
The teacher will describe and compare positive and negative space using stacked chairs and student volunteers. Teacher and students will demonstrate how a hand can go through negative space, but not positive space. Students will be asked to demonstrate both without teacher help, they will also be asked to put arms around the chairs indicating that negative space.
The teacher will demonstrate complementary colors through explanation, review and an experiment. The experiment will have the teacher hold a colored paper against a white paper. Students will stare and concentrate on that for one minute. After time is up, the colored paper will be pulled away leaving an after-image of the colored paper which is its complement. This will be done with two or three different colors.

The instructor will give a demonstration while giving directions on how to complete project by:

1. explaining how to select an interesting segment of the chairs to draw from.
2. instructing the students not to try to draw the whole thing.
3. requiring that the drawing go off the paper on at least three sides.
4. drawing only the negative space.
5. drawing on 9X12 sheet of paper.
6. cutting the negative space carefully.
7. gluing onto 12X18 complementary colored paper using the same design organization to show negative space on one half and positive space on the other.
Activity:

Teacher will restack chairs so that students cannot copy from demonstrated design. Students will draw the negative space in pencil on colored paper. Students who draw positive space will begin to add details such as knobs, rivets, and lines that separate one part of a chair from another. The teacher will point out that they should draw the space and not the chairs.

Some questions that may be asked of the students:
1. What is positive and negative space?
2. What are complementary colors?
3. How does an object influence the space around it?

This is a difficult concept for children. They will be encouraged by teacher enthusiasm when they are correct and assisted if necessary to help them see the negative space as an object that can be drawn. Lots of teacher movement will be required to keep children on task.

When students begin cutting, it is important to emphasize that they cut on the lines only. The entire paper is used in the final gluing process and any inaccurate or careless cut will show. When gluing, the student will first glue the positive image, pencil
side down on one-half of the 12X18 sheet. The rest of the design is then completed by putting opposite (negative) shapes on the other half. Projects should be neatly glued.

**Closure:**

Students will write on the back of their designs or on a separate piece of paper anything they wish to express about their project. Students will display their work in the room or the teacher will display them in the halls of the building. The effect of these designs hanging all together is exciting to the children and really brings out the design quality of the works.
LESSON PLAN NUMBER FOUR

Contour Line Still-Life

Major Objective:
The students will use fine line marker to draw a still life using contour line. The method used will be that described in Drawing With Children by Mona Brooks. A handout sheet will detail the method. The students will demonstrate the use of contour line by drawing the still-life as a series of shapes. Overlapping to show spatial relationships will also be utilized.

Instructional Resources:

Visuals:

"Le Preteur Sur Gages" by Quentin Metsuys, (Shorewood Visual).

"Un Bar Aux Folies-Bergere" by Edouard Manet, (Shorewood Visual).

"Still-Life with Pipe" by Morandi, (Illustrated Library of Art, p. 635).

Student Handout:

Prepared by instructor

Materials:

Drawing paper, two per student
Black fine-line marking pens
assorted objects to create still-life stand to put still-life on

**Vocabulary:**

1. **Space**— an area provided for a particular purpose.
2. **Line**— a thin continuous mark made by a pen, pencil or brush.
3. **Shape**— something distinguished from its surroundings by its outline.
4. **Contour**— An outline.
5. **Still-life**— a group of objects that do not move.
6. **Permanent**— Meant to last, not erasable.
7. **Overlap**— to lie or extend over and partly cover something.

**Instructional Action:**

**Motivation:**

The students will be given a handout to read and asked to do the activity that is included in it. The teacher will check to see that all students are able to do the overlapping exercise correctly. The teacher will then use visuals to show overlapping in works of art and examples of still-life.

**Instructional Action:**

**Motivation:**
The students will be given an handout to read and asked to do the activity that is included in it. The teacher will check to see that all students are able to do the overlapping exercise correctly. The teacher will then use visuals to show overlapping in works of art and examples of still-life.

Questions:
- How is line used in the paintings?
- How does line help our eye to move about the painting?
- Do the contour lines help us to concentrate on the objects in the picture?
- Not all paintings use contour line. Is there more than one way for an artist to use line?
- Why do you think artists paint differently?
- Can line help us to express ourselves in different ways?

The instructor will then demonstrate how to use contour line to draw from the still-life which has been set up while students look on. Students will move to a seat of their choice. Advice on drawing
spatial relationships is in the handout. Students will be asked to follow these directions as much as possible.

The teacher will also demonstrate proper posture and the reason for sitting square with the drawing surface.

Stress will be given to finding the front object in the still-life. This object is then broken down into component shapes and the closest part is drawn first, followed by the next closest and so on until that object is drawn. The next closest object is then drawn the same way until the entire still-life is drawn. The use of permanent pens will make student aware of the importance of thinking about what they put on the paper before it is drawn. Any errors in judgement will be corrected by adding necessary lines, textures or pattern to hide the flaw and change the object to satisfy the student.

Activity:

Some students will have difficulty understanding that an object is a group of shapes. The teacher will need to circulate quickly about the room so that students having trouble do not get frustrated, especially since erasing will not be possible. It will be important to let students know that markers
give them freedom from mistakes rather than being a tool which makes their errors indelible.

Students will need to study the shapes before drawing them. They will need to believe what they see.

Two class periods will be needed for this lesson. One drawing will be completed during the first week. The second week will include review as necessary and the completion of another still-life. The still-life will be the same objects, newly arranged. Drawings will be signed and dated so that students will be able to see the difference from one week to the next.

Closure:

15 minutes before the end of second class:

Students will write on a separate piece of paper comments about the drawings. These questions may be helpful:

-How well were you able to use contours to make the shapes of the objects?
-Did the drawing become easier or more difficult as you worked on it?
-Which was more important, shape or line?
-How did you use positive and negative space?

After writing students will put drawings and comments in their portfolios.
**Vocabulary:**

1. **SPACE** ... an area provided for a particular purpose.

2. **LINE**  ... a thin, continuous mark made by a pen, pencil or brush.

3. **SHAPE**  ... something distinguished from its surroundings by its outline.

4. **CONTOUR**  ... the outline of a figure, body, or mass. The line that represents such an outline.

5. **MASS**  ... the physical volume of a shape.

6. **STILL LIFE**  ... a group of objects in a drawing or painting.

7. **PERMANENT**  ... meant to last.

8. **OVERLAP**  ... to lie or extend over and partly cover something.

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*Figure 1. Vocabulary for lesson four.*


Still Life Drawing

Overlapping - In drawing, overlapping gives you more choice in what you draw. It allows you to show front and back and will make your drawing more interesting.

Below are four problems. The first one is done for you. Use your creativity to solve the last three problems.

1. $\triangle + 0 = \bigtriangleup$ or $\triangle$ or $\bigtriangleup$ or $\bigcirc$ or $\bigcirc$

2. $C + \Box = $

3. $\Box + \Box = $

4. $0 + 0 + 0 = $

The key to overlapping is to follow this advice.

1. Draw the object in front first!

2. Begin drawing the object that is behind next. When you run into something, stop, jump over, and begin again! Let your hand actually jump over the object in front and then keep going on to the other side with the same line.

3. Don't worry if you don't do this "right" the first time. The "jump over" can be awkward and the "keep going" may not end up in right place. You'll get better with practice.

4. If you don't like the way you drew something, stop and take time to quietly think of a way to fix it so that you like it. You can - add on - cover it with texture - change it into something else

Figure 2. Handout for lesson four describes thought process for overlapping lines.
Beginning:

1. Decide which object is in front.
2. Find the central part of that object. The central part tells us what the object does. For example:
   - a spout pours - draw the hole first.
   - a lid lifts off - draw the knob first.
   - a pipe smokes - draw the hole in the bowl of the pipe first.
   - a pan holds things - draw the inside first.

   Draw the central part of the front object.

This may seem like drawing backwards but it allows you to add details as you see them.

3. When the front object is complete, decide which object is behind it but closer than the others. Now you will be "stopping" and "jumping over" the front object to create overlapping.

4. Draw it as you did the front object finding the central part - draw that first.

Keep going - you can do it.

Adapted from Drawing With Children by Mona Brookes

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Figure 2. Continued from previous page, this part describes drawing method.
LESSON PLAN NUMBER FIVE

Frank Stella- Shaped Canvases

**Major Objective:**

After viewing samples of Frank Stella's work from the period when he was using shaped canvases, students will cut a shape from paper and use marker or paint to unify the paper and media into one design.

**Instructional Resources:**

- **Equipment:**
  - slide projector
  - filmstrip projector

- **Visuals:**
  - *Discovering Art History, Art in the Western World*, tray D, slide 485.
  - *Wilton 300 Series*, filmstrip 306AA, two examples of Stella's work.
  - *Teaching Art 4-6*, Stella print from Protractor series.

- **Materials:**
  - painting paper
  - markers or tempera paint
  - brushes
  - water
  - newspaper to cover tables
Vocabulary:

1. Minimalism- non-representational art that consists mainly of basic geometric shapes and forms.

2. Hard-edge- a form of abstract painting characterized by clearly defined geometric shapes and, often, bright colors.

3. Shaped canvas- canvas for painting designed to become part of the artwork rather than just a surface for the paint to be applied to.

4. Unity- the combination of parts into a whole, ordered in a way that will be aesthetically pleasing.

5. Two-dimensional- having length and width.

6. Three-dimensional- having length, width and depth.

Background of the Artist:

Frank Stella is an American artist who began his career in the 1950s. He continues today in the 1990s to be a major force and influence on Modern Art. He had formal schooling but made an early break from the prevailing style at the time of Abstract Expressionism.

Inspired by the tools he used as a housepainter,
Stella made use of geometric regularity in his designs. His professional career as an artist began in 1959 when the Museum of Modern Art exhibited his work in a show entitled "Sixteen Americans". However, it was another work, a small collage done in 1959, that would tell Frank Stella's intention about the formal qualities of art. Titled "The First Post-Cubist Collage" the artwork humorously and arrogantly suggested that it was the first work where visual interest lies wholly in the activity on the surface. This idea would become Stella's trademark throughout his different periods.

His works are totally premeditated. His goal was to find the essence of painting. His shaped canvases of the 1960s create a painting rather than a painted surface. The canvas and paint work in unison to form the essence of painting. His works such as "Darabjerd III" from his famous Protractor Series, reflect his admiration for the tools of the draftsman and his love of car racing which is reflected in the sleek lines and metallic paints. By leaving out the evidence of the expression of the artist, the viewer experiences the line and flatness of paint without interference of subject matter. This minimalist approach became the manifesto of the 1960s (Ayers, 1990).
Stella's concept of having one artwork lead to another shows artistic growth. This unit is designed with that in mind. Stella's 1970 masterpieces in the Exotic Bird Series could not have happened without his prior art experiences to give him ballast even though those works were an enormous break from his other art. Children will see the work of an American master and understand that the detachment from his emotions in his work, gave him the freedom to use the formal qualities of art in a new and exciting way. He needed to concentrate on the components that make art in order to continue his focus.

In the same way, this unit introduces students to the formal qualities of line, light, shadow, space, color and balance before the construction of their boxes.

**Instructional Action:**

The teacher will show samples of Stella's work from his Protractor Series, relating the importance of the artist's work in twentieth century art. Instruction will include the concept of how his shaped canvases allowed painting to be viewed as a whole rather than as a rectangular or square shape with paint applied to it. Students will also learn that Stella adds a three dimensional quality to painting
yet his works are still truly paintings.

Vocabulary and information will be introduced to the students during the teacher presentation. At this time students will be encouraged to ask questions or comment about the artist's work. Teacher questions to students might include:

- How is this approach to painting different than what we usually think of as painting?
- Do you think the shape of the paper you draw on affects the way you draw?

Activity:

The students will be given paper and asked to visualize a shaped design on it. Then students will cut out their shape using only scissors (not drawing the shape first). Shapes should be non-square and non-rectangular. The students will then fill in the design with marker or paint.

During this time the instructor will circulate among the students asking questions about their choices and assisting when necessary. It may also become necessary to review basic painting techniques.

Closure:

Students will be given a handout questionnaire to answer to help them respond to their artwork. These will be passed out as students finish their work.
When artwork is completed, students will either place paintings in the drying rack or put marker designs in their portfolios. Students will clean up their own working space and then assist other students in cleaning up as needed.
FRANK STELLA

NAME

Date

1. Were you able to make your hard edge design look as though it was a part of the shaped paper? Why?

2. Was your painting/drawing hard edged? Why?

3. How did designing this type of space make you feel? Explain.

4. Why do you think Stella chose to paint his canvasses with hard edge designs rather than pictures of objects?

5. Even though Stella's paintings were done without representing objects—do you think he had to know how to draw? Give your reasons.

6. On the other side, give any other comments you wish.

Figure 3. Questionnaire for lesson five.
LESSON PLAN NUMBER SIX
Louise Nevelson Sculptures

Major Objective:
The students will view a filmstrip about Louise Nevelson and her art. After a class discussion and review, the students will use shallow boxes or crates to create their own interpretation of a Nevelson-like sculpture. The sculptures will be joined together and painted one color to create a wall that is reminiscent of Nevelson's installations. The interiors of the sculptures will be made with wood scraps and cardboard pieces as needed.

Instructional resources:

Equipment:
filmstrip projector
slide projector

Visuals:
Nevelson: A Life's Work, filmstrip no. 1.
Discovering Art History, Art in the Western World, tray D, Slide no. 393.

Materials:
wood scraps
boxes and crates
glue
hot glue guns and glue sticks
handsaw
hammer
nails
sandpaper
spray paint

Vocabulary:
1. Three-dimensional—having length, width and depth.
2. Assemblage—a sculpture made from an arrangement of miscellaneous objects.
3. Relief—the sculptural projection of forms seen only from the front.
4. Sculpture—art in the round or in relief.
5. Environment—surroundings, the circumstance and conditions that create a space.

Background of the Artist:
Louise Nevelson used her space in a different way than Frank Stella. The huge walls she created from mostly found wooden objects created mysterious environmental shrines. They were generally done in smaller units and were then put together so that they were taller than the viewer. By painting them all one color, (gold, white or black) she diminished the shadows and made objects less recognizable.
Born in Russia in 1904, Nevelson came to America at the age of four. She was married at age sixteen and led the life of a wealthy matron for years. She credited her mother's sense of style for influencing her own gift of line and flair.

She began art lessons in 1929 and admired the works of Hans Hoffman, Picasso and Diego Rivera as well as Pre-Columbian and American Indian art.

During the Federal Works Project in the mid-1930s she was both teacher and artist. This is when she became a sculptor (Louise Nevelson, 1981).

Nevelson is an "architect of shadows" and was the first to create the kind of sculptures that made her one of the foremost artists of this century.

Many of her installations make us think of places, especially cities. Nevelson created space for the imagination. Her works represent three-dimensional environments yet were meant to be seen only from the front. In this way they relate to painting as well as sculpture. It is the process of ordering and composing the structure that gives personal meaning and satisfaction to the pieces (McGraw Hill, cassette 2, 1989).

**Instructional Action:**

**Motivation:**
The students will view a filmstrip about Louise Nevelson. After this the teacher will guide a discussion about the artist and her work. Questions for discussion might include:

- How is the artistic space used by Nevelson different from the space used by Frank Stella?
- How are they the same?
- How is her space two-dimensional?
- How is her space three-dimensional?
- Are her environments real or imaginary?
- Why are light and shadow important to her art?
- How does Nevelson use positive and negative space?

After the discussion, the teacher will explain that the students are to use wood scraps to build an environment inside shallow boxes or crates. Before gluing, students will arrange the wood pieces, moving them around until they are pleased with the outcome. Hot glue guns are to be used only on those pieces which are too difficult to attach with school glue. Emphasis will be placed on creating space that is environmental in the same way as Louise Nevelson's
space. To do this students will need to think of their boxes as vertical areas and use overlapping wherever possible.

The teacher will demonstrate the use of the hand saw, hammer, glue gun and any other tools that may be needed by the students whenever necessary.

**Activity:**

Students will select their box and wood scraps and begin working. The teacher will circulate around the room assisting and guiding wherever necessary. The teacher will demonstrate the use of hand tools by offering individual help if needed.

Ten minutes before the end of the period the students will begin clean-up and storage of artwork so that it is not damaged.

**Allow two class periods.**

**Closure:**

After pieces are completed a place will be set up and the students will arrange their sculptures so that a satisfactory wall is created. Spray painting and final assembly will be done after school by the instructor so that students are not exposed to toxic fumes.

The students will be given a questionnaire to fill out which will be placed in their portfolios.
1. How did Louise Nevelson use positive and negative space?

2. How is Nevelson's use of space different from that of Frank Stella?

3. How are Nevelson and Stella pieces the same?

4. Louise Nevelson called herself the "architect of shadows." Why?

5. How is Nevelson's work 2 dimensional? 3 dimensional?

6. Nevelson put together objects to make her art. Name one or two ways she unified (or brought together) these different pieces.

Figure 4. Questionnaire for lesson six.
 LESSON PLAN NUMBER SEVEN

Imagination Boxes—Introduction
Light and Shadow

Major Objective:
The students will use corsage boxes to begin an interior sculpture that is their own personal space. This initial lesson will focus on the basic design of the box so that it can be seen into and on the effects of light and shadow on the interior.

Instructional Resources:

Visuals:
sealed sample sculpture made by teacher

Materials:
corsage boxes— one per student
scissors
Scrap construction paper
writing paper and pencil
miscellaneous objects

Students will need to follow specific teacher cutting directions demonstrated in class for safety purposes.

Vocabulary:

1. Relative size— how large or small an object is in relation to its surroundings.
2. Peripheral vision - the point at which our own visual boundaries begin.
3. Focus - when things begin to be seen clearly.
4. Direct light - light that comes from an immediate source, i.e. - sunlight, light bulb.
5. Indirect light - light created when direct light shines on and is reflected from an object.

**Instructional Action:**

During the introduction of this lesson, the teacher will go over vocabulary words using a diagram to relate the words to the inside of the boxes. Also, physical demonstrations will apply where possible. For instance, the students can discover peripheral vision by holding their fingers out to their side and moving them forward until the fingers can be seen.

The teacher will explain the project while passing around a sealed sample. The sample box is sealed so that the students do not know what materials are inside. This creates an inquisitiveness that will lead to more experimentation when the students begin their own sculptures.

These projects are spaces where the students have control over the environments they are creating.
Because of this, there are a few rules that the students will be asked to follow:

1. A person may not view the interior of another student's space without their permission. This will help the artist to feel freedom in space to do what they feel is personally and visually satisfying. The exception is the instructor will need to view, with the students permission, the interior to make sure the project is understood by the child.

2. Students may ask another student or the instructor to view the space.

3. Only the owner of the box may add or take materials out of the space.

The teacher will demonstrate how to fold the boxes together and how to make an eyehole so that the interior may be viewed. This needs to be done under teacher direction since the procedure requires specific cutting and the poking of a hole into the end of the box with a scissors. It is important that students understand that they must support the end of the box with spread out fingers so that they cannot poke themselves. One additional hole, usually in the other end will be made.
After the holes are made, the teacher will ask the following:
- What light do you see?
  Is it direct or indirect?
- If you do not see anything, how could you make a change in your box that will allow you to see?
- Can you see the inside of the box?
- What happens if holes are made in the top, bottom or side?
- What kind of light does this make?
- What does this experiment with light openings tell you about why we need light?
- Why does the interior of the box light up when holes are made?

Recall Stonehenge:
- How is the light in the box similar? Different?
- How is the light different than the light you had available for your Nevelson sculptures?

The teacher will tell the students to put an object in their box. The following questions are asked:
- Can the space be made small?
- What word from the vocabulary does this explain?
- Will size affect your own idea for the design of your space?
Activity:

The students will use the rest of the class period to experiment with the space in their boxes. Cellophane tape will be used to position objects so that they can be removed at a later date if the student desires. The teacher will circulate around the room as students work assisting and offering encouragement when necessary. The instructor will also monitor the room for excessive socialization. The students will get very excited about what is happening in their boxes and may forget the project rules.

Ten minutes before class ends, the students should finish putting in their last item for the day. They will need to write their name on the top of their box and place them in the area of the room designated by the teacher. Each student is responsible for cleaning his or her own area.
LESSON PLAN NUMBER EIGHT
Imagination Boxes—Color and Light

Major Objective:

The students will view slides of Gothic stained glass windows and Marc Chagall's stained glass windows to learn about the historical significance of color and light. They will also go outside and view their environment through large sheets of cellophane to understand how color affects their own view of the world.

The students will use a variety of colored materials to explore the effects of color on the environments they are creating.

Instructional Resources:

Equipment:

slide projector

Materials (in addition to supplies from lesson seven):

clear tape
tissue paper—assorted colors

glue
cellophane, assorted colors

permanent markers
roll paper, 36 inch, assorted colors
Vocabulary:

1. **Transparent**- something that can be seen through, such as glass or cellophane.
2. **Opaque**- something that blocks out light such as construction paper or cardboard.
3. **Translucent**- something that allows light through but can't be seen through such as tissue paper or fabric.

**Instructional Action:**

After a brief review of the previous lesson, the students will view slides of examples of stained glass work from medieval times and the present. During the slide presentation, the teacher will give information about the historical importance of stained glass in architecture and as an aesthetic object.

The teacher will explain that stained glass was important to medieval people because they were able to create, with glass, a wall that looked like jewels. The light they brought into the churches through stained glass windows represented light as a precious object like the emeralds, rubies and sapphires it represented. This art form began around 1100 A.D.

By 1400 the glass windows and architecture were
designed together instead of the windows merely being a decorative part of the church (Hutter, 1964).

Question:

-How is this like Stella's concept of painting?

By the late 1400s glass became almost like an easel painting- an art form of its own and stained glass artists were no longer part of the builder's guilds but the glass works were often directed by painters (1964).

Marc Chagall's windows are important for us because they bring an updated view of this traditional art form. With these windows stained glass became an artistic expression (Lawrence, Seldon and Stephen 1976).

After looking at the slides, students will go outside and use long sheets of cellophane and opaque paper to experiment with the effects of color in their own environment. By looking through different colors at the world around them they will see how colors affect each other and how colors can create moods or feelings for the individual.

The students will return to the classroom and experiment with using color to create satisfying space within their own sculptures. This will be done by:
1. using different materials to cover light holes in their boxes.
2. placing colored papers in the boxes.

The teacher will demonstrate "light pipes" during this phase of the activity. These are colored paper tubes or folded shapes that act as "chutes" for the light to enter the space. When cut on the bottom the inside illuminates and creates colored designs inside the box.

**Activity:**

During the remainder of the period, students will continue to create their environments. The sculptures will become more permanent as students find satisfying solutions to problems and exciting effects they wish to keep.

The teacher will circulate around the room assisting when necessary and guiding students to solutions to aid understanding of the concepts of the lesson. The only problem anticipated is too much excitement and consequent student movement. If necessary the instructor will only students are working at their places.

**Closure:**

During the last fifteen minutes of class students will fasten anything into their box that they wish to
keep. Then students will be directed to write about what they are doing with their environments. Possible questions, if guidance is needed might include:

- How is color and light in your box similar to or different from the light in a Gothic church?
- How does color affect our mood?
- What kind of "house" is this for you?
- What materials brighten or darken the space?
- Look into your box and write about the light.
- Look into your box and describe the space.

The students will store their work and place writing in portfolios.
LESSON PLAN NUMBER NINE

Imagination Boxes - Reflection

Major Objective:

This lesson will help the students focus on finishing the project as well as introducing a new way of seeing.

The students will be given reflective materials and will experiment with them inside their boxes to create shapes that are reflected and that will reflect light.

The students will end the lesson with mental "reflections" of what they have experienced and created while working on and in their personal space.

Instructional Resources:

Materials (added to those from seven and eight):

- clear sheets of acetate
- foil
- miscellaneous reflective objects

Assessment:

Student writing will be the main tool for assessment of progress. This will be the indicator of overall student satisfaction. Use of time during the project will be determined by the teacher as well as whether
the student utilized materials creatively within the guidelines of the project.

**Vocabulary:**

1. Reflection- (a) to throw or bend back light from a surface.  
   (b) to form an image of an object, mirror.  
   (c) to think seriously, careful consideration.

**Allow ten minutes.**

**Instructional Action:**

The students will be given one sheet of acetate each and foil will be added to those materials that have been used throughout the project. The teacher will explain the reflective quality of both with no general demonstration.

The students will experiment with the reflective materials and any other materials they may need to bring their environments to a satisfactory conclusion.

**Activity:**

The students will use the rest of the class period to finish project. The teacher will circulate around the room giving guidance or demonstrations as necessary to individual students.

When students are finished with their imagination
boxes, they will answer questions about their projects and add any pertinent information that they wish. These will be placed in the portfolios.

**Closure:**

At the completion of their project the students will answer the following:

1. How did the reflective materials change your space?

Look into your box and imagine...

Answer the following:

2. Where is this place?
3. What would you wear to go there?
4. Would anyone go with you? Who?
5. What time is it there?
6. How old are you there?
7. Is it warm or cold?
8. Describe the smell.
9. Describe the sound.
10. Add any other insight.
11. How does what you have created express who you are?
UNIT EVALUATION AND RECOMMENDATIONS

Unit Evaluation

The sequenced unit enables the students to focus on one concept in varying ways. In this unit, that concept was space and how people use spatial relationships in art and in their lives.

Progress by the students was able to be seen in many ways. One of these was written expression. Although some students wrote very little throughout the unit, many students, particularly the older students, developed the ability to critique their work with eloquence. The unit was not designed to increase these skills but to make them part of the working process so that students became comfortable writing about their art. The instructor did not use the students' written comments for grading but as indicators of student understanding of lesson contents. The student's written responses were done at the end of the class periods or upon completion of each individual's work. Because of this the time allotted for written expression varied from student to
For future lessons where written responses are desired, bound diaries or folders would possibly help to give continuity to this type of response. However, for this unit, since writing was introduced in art for the first time, there was no pressure put on students to perform in this way. The instructor's goal was to have students use written comments about their work as a means of basic critical self-evaluation.

Student portfolios were another way the unit was assessed. From the instructor's viewpoint, these are good organizational tools that also make the students responsible for their own work. The biggest advantage is that the child's progress is seen in relation to that youngster's own art work instead of being compared to the work of other students. This is what would normally occur if classwork were collected at the end of class by the instructor. While subjective evaluation is, hopefully, not a goal of any art program, it is difficult even for the best art teacher to judge work on its own merit when it is part of a stack of twenty-five similar pieces. Unless the teacher has time to evaluate "on the fly" during the class period, this can easily happen.

Portfolios create a sequenced collection both for
the student and the teacher. They are a constant reminder of where the student has been. The complete portfolio which is an instrument of the Arts Propel project and includes everything is an especially good idea. By not just having finished works included, these portfolios showed trial and error. Since all attempts were kept, all work, in theory, has value. For some students, the portfolio also gave the teacher insight to time spent on task since doodles and other papers that normally would be thrown away were included.

Collecting work individually in a portfolio gives the students a sense of ownership also. In the beginning of the unit, students often had difficulty finding their portfolios. They also were not careful of other students or their work. As the unit progressed, getting them out and putting them away became a part of their art routine. Students knew where their portfolio would be in the cupboard and waited for other students rather than crowding, reaching or grabbing. The children also became more conscientious about putting away their art work. Initially, the instructor had to repeat several times for students to put work in their portfolios. Later lessons seemed to have less work left behind when
classes had gone. Also, fewer students asked where their work was the next time they came to art.

The most important aspect of portfolio evaluation was that the first lesson of the unit was always there as a reminder of where the child was developmentally at the beginning of the unit. These drawings from lesson one were simply an imaginary expression of the creative child. They served as a starting point for drawing skill, written expression, spatial development and creative ability. This reminder made it possible to put other works into perspective.

The other advantage for the instructor was that this type of organization allows for artwork to be seen when the time allows since it is not always possible to evaluate during class. Papers do not stack up or get misplaced in the room and the written comments refresh the teacher's memory of what the student was thinking during the art process.

Likewise, the students can evaluate and discuss their work at any time because there is a complete collection. It would be a good idea to have an individual attendance record on each portfolio or even a place where students could give themselves a daily evaluation which could be added to the teacher's assessment. This might provide one way that portfolio
assessment could be transferred into grades.

The biggest drawback of the portfolios is that they only hold flat work and they take up a large amount of space in storage areas.

The sequence of the unit worked well. The first lesson dealt only with space and creativity. No specific guidelines were given as to how to draw, but students did have to think of objects as spaces and spaces as objects rather than voids. This lesson was an introduction to the unit, the child's first basic idea of a space, a home, was used.

The next lesson provided students with examples of how people have viewed spaces in the past. Through architectural spaces, the sun and its effect on the ancient world could be controlled, or at least interpreted, by people who had primitive lifestyles. These temples were special, spiritual places: structures created to help understand their environment.

The activity in this lesson gave the students the opportunity to use space three-dimensionally. The students were serious about their undertakings, yet there was a lot of fun involved. The ownership of the artworks was group rather than individual and temporary, since the structures were not permanent.
This lesson was the first time the students had made art in this way. Building in groups with blocks promoted cooperation with others, use of shared space, understanding of spatial relationships as well as tactile instincts to make art. Viewing art as a process rather than a product helped students understand the value of personal expression.

Lesson three, about positive and negative space, gave names to the spaces the children had experienced in the two previous lessons. In this lesson space, as an object, comes to the front. The combination of opposite spaces and complementary colors seemed to make the students' sense of positive and negative space very keen. In subsequent classes, especially the Frank Stella paintings, their understanding of positive and negative space really made itself evident, especially in discussion.

Still life drawing using contour line and Mona Brookes' method of drawing did not rely much on previous lessons. The use of positive and negative space was there but the thrust of the lesson was for students to see that space can be created on a two-dimensional surface by using overlapping. Students were able to see the spatial relationships of objects and transfer what they saw onto the picture.
plane. Children entering the pseudo-realistic age were able to use this as a solution to defining space. For students in the Gang-age, this type of analysis gave them the freedom from their baseline drawing as well as space that was not self-centered. All lessons from this point on include overlapping.

Shaped paintings was probably the most difficult lesson in the unit to execute. However, the discussion of Frank Stella's work drew upon:

Lesson one- creative space
Lesson two- architectural space
Lesson three- positive and negative space
Lesson four- overlapping to show depth and spatial relationships.

From a critical thinking standpoint, this lesson began the students' first analysis of artwork in the unit. During the discussion of the artist's work in the first implementation of this lesson, the use of positive and negative space was recognized and named by a student whose artistic ability and class participation up to this point did not indicate a high level of understanding. This learner's ability to recall recently learned spatial concepts, in the context of space, in a work of art, is an example of why sequenced learning works. Building blocks of learning
used in the unit did not really connect for this child until the fifth lesson. From that point on, the individual's class participation, attitude and ability to accept teacher guidance improved. (When the unit ended these traits continued.)

Use of media and ideas for this project made the learners rely on their own imaginative abilities to create art. Abstraction (although not a vocabulary term introduced to students) would be the type of space used for this and all subsequent lessons.

Use of three dimensional space and the recall of shadow and light (lesson two) were needed for the next lesson. Louise Nevelson's work presents a way for students to see sculpture as something viewed from only one place rather than in the round (lesson seven, eight and nine use sculptural space similarly). Also, the works viewed and made in this lesson are environments. From this lesson until the end of the unit all spaces are environments or "homes" (lessons one and two).

Critically, students compare Stella's paintings with Nevelson's sculptures. They are asked how the space used is different and how it is alike. The qualities of two-dimensional versus three-dimensional space are examined as are the artists' unique uses of
positive and negative space and overlapping to create depth.

The final project of the unit encompasses three lessons. The introduction of the imagination box and the vocabulary relies on:

Lesson one- The boxes are to be the students' own personal spaces; a "home" for their imaginations.
Lesson two- use of light, shadow and architectural space.
Lesson three- Negative spaces let light in, positive spaces create relative size.
Lesson four- Overlapping creates depth and space in the interiors of the boxes.
Lesson five- space for art to happen.
Lesson six- art as imaginary environments.

The eighth lesson presents the historic importance of art and architecture. These are demonstrated visually with the introduction of stained glass and how it was used to show how precious light was to people past (Gothic) and present (Chagall's Jerusalem Windows). Previous lessons continue to be reinforced with the addition of color. Zenith tubes and other light holes from lesson two are used as
examples of light openings for architecture.

The final lesson uses reflective material to change environmental space. Students also reflect critically on their work and ability to create artistic personal space.

The students really seemed to understand their personal spaces. They were asked to answer ten questions but were not asked to comment on the formal qualities of their art. This could be added but would need to be done after the aesthetic inquiry that elicits answers about why the space they have created is their own.

For students this young, personal insight needs to overshadow any questions concerning academic understanding. In this way, the importance of their art as a personal, visual expression of themselves is not diminished.

Lesson Evaluations

Lesson one- A House is a House For Me

This lesson was a good place to start the unit because there was no pressure placed on students to create a finished artwork. The concept was to let them explore different ideas of what a house can be.
In general, students who tend to be creative had little problem understanding what they were to do and those who need more direction in their work had difficulty.

The children had been directed to use their own ideas rather than those in the book. Even though there was discussion about objects and the spaces where they belong, some students chose unfamiliar themes. For example, two of the fifth graders drew a bunny in a hole. The drawings were very small and one even drew the underground "x-ray" habitat of the animal. Another tried to draw a beaver's dam. These were difficult ideas because they are not really tangible experiences for city children. It was difficult to escape the baseline drawing and make the space seem personal to the object. Another fifth grader chose a ball-glove as a place for a ball but began two drawings of this idea by tracing her hand onto the paper to make the mitt. These are good examples of Lowenfeld's "gang-age" drawing. One of the bunny pictures and the traced hands are examples of copying. There was no risk taking.

The older children chose objects more familiar and closer to their personal experiences. One example was a Pepsi can as a home for "pop". The soda
explodes from the can. The student had some difficulty with the roundness of the can and the liquid drops, but over the course of the activity was able, with guidance, to change the drawing satisfactorily. Many children expressed their ideas as things belonging to their body. Eyeglasses as a home for sight were drawn by a student who has a lot of natural ability. The face wearing the glasses was drawn after the idea had been shown and in the final drawing there is no doubt that the glasses are the important part of the picture. Another student drew a face as a place for lips but rather than enlarge the drawing to express only that single idea, continues to add the details of personal expression. The lips, however, were made bright red.

Many of the students had difficulty drawing large on the paper. One drawing in particular was of a squirrel at home in a hole in a tree. The drawing was very tight and small. Instead of enlarging that single concept, the student kept adding details to fill the space on the picture plane. The squirrel hole had acorns in it, the tree had branches and leaves, there is ground detail. The final picture was very complete but the initial idea was lost and the drawing did not have the intimacy of a "home".
When viewing the portfolios, these drawings are good indicators of the individual abilities of the students and help to put later artworks into perspective. These drawings provide a reminder of the starting point of the child. Later work can be assessed from the student's own reference point rather than unconsciously compared to the work of others in the class.

The writing done on these drawings was the students' first attempt at critiquing their own work. They were asked to write on the drawings or the back of the paper. Most of the comments were not about the work itself but about the student's attempt at coming up with ideas. They indicated that it was hard, easy, sometimes hard and easy but did not give reasons for what they wrote.

**Lesson two - ancient structures**

This lesson began with the students viewing a cartoon called "Greedy Humpty Dumpty". Humpty is a king who thinks the sun is gold and forces his subjects to build a tower so he can reach it. In the end, the sun strikes out at the king, the tower falls and with it Humpty Dumpty crashes and breaks into pieces. This provided a fun introduction to the temples in Babylon which the Hebrews were forced to
build and later became the biblical "Tower of Babel".

The students were very attentive and curious about this as well as the mysterious Stonehenge and ancient solar calendars used in the teacher's presentation. The students had all attended Sunwatch, a local ancient Indian site with a woodhenge. This was recalled during the discussion time.

The students divided into groups of two or three and built structures of their own which would create light and shadow effects. The students in the second semester approached this much more scientifically than the first group and really tried to create calendar-like formations.

They really enjoyed building with the wood blocks. Large sheets of cardboard used as backdrops were introduced by Dr. Zahner and made the students even more excited because the shadows were emphasized more and differently. Students were reluctant to tear down their creations at the end of class. Most wanted to see what others had done and were anxious for their own structures to be seen by others in the class. The most common comment was, "Are we going to do this next week?"

The group work was successful. All the students participated and each seemed to have his or her own
role within the group. There were few instances where the instructor had to remind individuals of the task at hand.

Drawings and written comments about this lesson were minimal. The most eloquent was a fifth grader's note, "I think my invironment (sic) is done because I like It (sic) and I would like to live in it."

Lesson three- Positive and Negative Space

The drawing in this lesson was difficult for most of the students because they were being introduced to a whole new idea. Trying to draw the negative space, or the shape of what is not there, required seeing space in a whole new way. The students were seated around the stacked chairs so they could not copy because each view was different. The ninety minute class periods were nice because they allowed enough time for motivation, demonstration and drawings to be completed at one time without a rushed atmosphere. For most children, cutting and glueing were done the second week.

The finished designs out of complementary colors were a good way to complete this project. To have students only do a drawing would have made the spatial concept less clear. After cutting out the shapes, the students seemed to be able to understand positive and
negative forms when placing them on opposite sides of a 12 X 18 sheet of paper. A few students tried to make the design symmetrical. This was easily corrected so that one side was a positive image and the other a negative of the student's design.

Some students were able to make quite sophisticated designs while others used only a few shapes. It seemed that the children sought their own developmental level when choosing what section to draw. Students were not asked to draw more difficult areas of the stacked chairs but might have been guided to a different area of the still life in order to see negative shapes more clearly.

For this lesson, negative space was demonstrated as the areas where the students could see completely through all the chairs to the other side of the room. For students really having difficulty with this a large colored paper was put on the other side and they were told to draw the colored areas.

All of the students attempted this lesson and very few were not pleased with their final work. The papers were displayed together with edges touching both in the hall and in the room.

**Lesson four-** Contour line still life

Most of the students did well on this lesson.
They were encouraged by the way their drawings looked realistic and did not seem to fall into old habits. There were a few who began at the bottom edge of the paper but no one drew a baseline.

For the children in the pseudorealistic stage, this kind of drawing seemed very gratifying although challenging. Some students wanted to make "sketchy" lines and drawing only contours was sometimes difficult. New paper was given if needed but first students were encouraged to "fix" mistakes creatively. They seemed to like the freedom of changing objects to make their mistakes into workable parts of the drawing.

Students who finished early drew the stool and board that the still life sat on, but students did not seem to feel their drawing was incomplete if these were not included in the final product. Overlapping to show placement and spatial relationships of objects created a sense of stability in the drawings so that making the table was not a priority.

Students seemed to enjoy this lesson. They sat where they wanted so that they could choose their own view of the still life. There were very few times the instructor had to have someone move because of behavior. These separations were made before the
activity began when possible. The instructor feels that Mona Brookes' method of drawing is satisfying especially for students who have difficulty drawing. This is because it explains how to break down objects into components and there is a formula for what to draw when. It is unlikely that the success the children had with their drawings would have occurred without this method. However, those youngsters who already drew well really excelled when spatial concepts were presented in this organized fashion. Students were not as protective about their drawings as they have been in the past. They did not cover them with their arms or hands as the teacher approached and were anxious for critical analysis of their work. Students who really had a great deal of difficulty were given a few objects to draw at their place and seemed to do better with the close up view.

**Lesson five- Frank Stella's shaped canvases**

This lesson changed from the first semester implementation to the second. During the first semester, students could use either markers or paint to make the shaped pieces. It was felt that paint was more appropriate for carrying out the essence of Frank Stella's work and second semester students used paint only.
The marker designs were successful in that they were neat and a hard edge was easier to achieve, but the instructor did not feel there was continuity from ideas presented during motivation to the media process.

The discussion part of this lesson was very exciting. Students were really able to see and talk about the positive and negative space in Stella's work. They were also able to identify overlapping. Students were interested to learn that Stella is still alive and wanted to know if he could draw.

Not all students were able to make successful shaped pieces. It would be interesting to do this same lesson but devise a way to raise the edges of the paper so that the students were painting on a raised surface. This would give more of the feel of the shaped canvas.

In answer to the question "Was your design hard edged?" students wrote:

1. "No because I didn't know how."
2. "Yes, because the lines followed the design."
3. "No, because it had overlapping (sic)".
4. "No, because sometimes you can run into some problems."
5. "Yes because I made my shape like my paper
6. "Yes because I had made a mistake and it made a pattern."
7. "In a way I was able to make shaped edges."
8. "Yes, because I have overlapped my picture."

Some of these comments are understandable and some indicate that students were not sure of the concepts. However, when walking around the room during the activity, most students were able to verbally communicate an understanding of what they were doing.

Some written comments gave other insights. One student wrote that Frank Stella had to know how to draw or his paintings would not look right. This student's art skills are not as mature as most others in that grade but he makes up for his lack of skill in effort. This comment shows an intuitive understanding of art that is on the student's developmental level. This is the same child who drew the x-ray bunny hole in lesson one.

Another student wrote, "what I feel (is) that I love art work and I love Stella art work that can learn (teach) people how to make space." About feelings that they had when designing this type of space another student wrote that it was "nice to have
space."

Why did Stella choose to paint his canvases with hard edged designs rather than making pictures of objects? "Because he probably liked hard edges on his paintings," wrote a student. A different answer stated, "Because that was the way he felt and that was what he wanted to do." Although these are not the answers one would expect, they are very logical and show the thought processes from the children's point of view.

In the future, this lesson should employ the use of tools to make the shapes. Protractors and other circular or linear objects could be used to aid the students in making geometric based rather than abstract shaped papers. This would possibly increase understanding of Stella's intent.

Lesson six- Louise Nevelson sculptures

The students were very enthusiastic about working with the boxes and scrap wood to make these spaces. The students in the first semester spent more time placing objects in the spaces before gluing. However, there were students in this group who also had difficulty thinking of their box as an upright space. This did not happen in the second semester. The latter group, however, did have a few students who
worked horizontally instead of vertically.

The materials were slightly different during the second semester. A saw was available and the wood included long strips as well as shapes used the semester before. The instructor also made more glue guns available and students did not use school glue as much.

The students' sculptures were generally successful and all the students seemed satisfied with the outcome. Most students were aware that both Nevelson and Stella used overlapping and positive and negative space. When asked how Nevelson's spaces are two-dimensional, students knew that they are not in the round, but form a wall, yet they are three-dimensional because there is overlapping and use of positive and negative space to create shadows.

The handout sheets with the questions to answer do not elicit the response and level of understanding that talking to students during the activity does. The printed sheets are less personal and since they are not tests and are not presented as such, the students may not be as careful with their answers.

Two of the fifth graders turned in verbatim answers to the questions. The instructor had no idea which student knew the information and which did not,
or if they consulted with each other and came up with their answers together.

**Lesson seven**- Introduction to imagination boxes

A great deal of time was spent on vocabulary but students were attentive. They were anxious to get to the boxes and followed directions well. A few needed teacher assistance to make the eye hole.

The students experimented with crumpled paper and some used the wood from the Nevelson projects as their first object in their environment. As students added and moved objects they began to understand the importance of putting light into the boxes.

**Lesson eight**- Light and color

The students liked seeing examples of stained glass and were interested in the history and pictures presented. They wanted to know what the windows were about. They especially enjoyed going outside and using the sheets of cellophane to color the environment they saw. As expected they were playful, but this did not interfere with the outside activity. When work on the boxes resumed, they eagerly tried colors in several ways both inside and outside the boxes.

Students were so anxious to have the instructor see the boxes, that a rule was made that the teacher
would only look in boxes of students at their work area. Students eagerly showed other students what they were doing and shared ideas.

**Lesson nine-** Reflection

In this lesson, students used reflective materials in their spaces. They also fastened the materials used inside their environments as permanently as possible. Some sculptures were extremely difficult to view because students had placed objects in them that blocked the interior space. For the most part, they were nicely done.

The students seemed also to enjoy the ownership of their art that the classroom rules allowed. There were students who said their environments were not ready to be viewed when the instructor asked permission to see them.

Students answered questions that were written on the board when they were done with their imagination boxes (questions are listed in the lesson plan). Here are some of the things they wrote about their environments:

**Sixth grade boy-**

"There is no time there, so kids don't have to go home, only when they want to.

It smells like candy."
No sounds but kid sounds."

**Sixth grade boy**-

said he would take his two friends, they are all sixteen years old instead of their present ages.

It looks and feels warm.
It smells like the woods.
It sounds like animals.
It looks like fire.

**Sixth grade girl**-

"It's me in a color that's bright."

**Sixth grade boy**-

"It takes place at a place called Sully's on Salem Ave.
I would wear a suit.
(I would take) My brother so he could drive.
It is almost dark. It is about 8:30.
I was going on 22 (age).
It is cool because the door is open.
It smells like incense.
It is really noisy 'cause it is a party.
This expresses me because I am what I created in my brain."

**Sixth grade girl**-

"My place is my own little place, I don't
know where it really is but I really do like it there.

Going to my place, I would wear modern clothes because it feels really comfortable and I don't think I would be able to get used to a different kind of clothes.

When I go to my place, yes I will take someone with me, her name is Mary, I would take her because I know she would like to come.

At my place it is usually dawn or sunset. It is really fun there.

When I go to my place I am any age. It's fun here when I'm two years old, it's even fun when I'm fifty years old.

In my place it's always the temperature I want it to be.

In my place it smells fresh and clean like there's no pollution (sic) at all, the way I think it really should smell.

In my place you can't hear any car or anything like that, all you can hear is the sound of birds chirping and the animals running through the leaves.

I think my place is great and that it is all I ever could ask for. I love it there.
My place helps me express myself because it has no pollution, raceism (sic) or any hunting, and it has world peace. If the real world was like that it would be perfect. I think in my work from the beginning of the year till now I've improved alot because if we were asked to remake our first picture I know I could do better."

Sixth grade girl-

felt her space was where she and her family could escape from the drug world. Fifth grade girl-

"At first I started out slow and messy but now I been working on it and now everything has change(d) and I'm doing O.K. I know more about space but I know a little of everything...

My box don't get that much light but it does look really neat. It's fun to work."

Sixth grade girl-

"I think it was very fun because we learned alot...about space (negative and positive space). The box was the funest (sic) thing so far yet."

Sixth grade boy-

"This is the future. (I would wear) an astronaut space center suit,
boots and a pair of solar powered sunglasses. I wouldn't take anyone.

It is night.

(I'm) 25 years of age—an adult.

(It is) cool. Because the temperature is always cool/cold in the future.

It smells like toxic waste, and sort of a gasoline smell to them.

It sounds like the ocean whooshing back and forth.

I am thinking, 'is this the end of everything or what?'

Throughout our first art class unit I've learned how to use space and how to mix colors using paint. I also learned to use my time wisely. I also learned to be more creative with my work. All of the things I learned this unit were very interesting and fun."

Sixth grade girl-

"I learned that you can make a design only comfortable for you and that I like what I have done..."

Sixth grade girl-

"It is a concert or party room...wear jeans and a tee shirt."
I would take someone with me because you are always supposed to go to a party with someone. I would take the whole school if I could.

I'm having fun and it's exciting to create your own imagination."

All of the students who copied during the unit were fifth graders. Lowenfeld says that copying is indicative of this age and, as students feel more secure about their self-expression, it subsides.

Sixth graders were more able to understand the abstract concepts of space. They were less preoccupied with trying to make a specific place and more apt to rearrange objects in their boxes when new entries blocked them or changed them.

**Instructor Evaluation**

The unit is sound. Concepts were generally understood by the students and the quality of work is satisfactory, in many cases it is superb.

From a personal viewpoint the teacher feels the unit was taught well. Fortunately, it was taught four different times and necessary changes could be made to make concepts more clear. No drastic changes were made because of the unit being part of the Master's
If changes could be made, the instructor would like to do the unit with only sixth graders. Their developmental age is keyed into the lessons more than the fifth graders. It was also difficult to have the fourth grade in the room at the same time.

A chart to aid in assessment of the lessons was developed during the implementation of the unit. The chart was designed to measure high, low or medium competency for the skills noted. The instructor found this type of record keeping to be very time consuming, but useful when measuring students according to their own competencies. The ability to refer back to lesson one as a cue to the individual's developmental level was especially helpful. This chart is included in the appendix.

Dr. Zahner's comments will be used for additional teacher evaluation (Appendix).
REFERENCES


Dayton: Dayton Art Institute.


In art class today Mrs. Ayers had me to draw a object and a house for the object at first I didn't understand what she meant then I really got the hang of it.

**Figure 5.** "Glasses are houses for seeing," drawn by a sixth grade boy during lesson one.
Figure 6. A structure built with blocks during lesson two. The diagram and description of the work give insight to student's understanding.
Figure 7. This student returned during a recess to make a structure because he had missed the last part of class when the constructing was done (lesson two).

Figure 8. This structure's design shows the influence of Stonehenge which was part of the motivation for lesson two.
Figure 9. Two views of the same structure show how students aligned the blocks to control shadows (lesson two).
Figure 10. Lesson three showed students how to see positive and negative space. Here is an example of how a student used stacked chairs to create a design demonstrating understanding of that particular spatial concept.
Figure 11. These two works show the same student's drawings from lesson one and lesson four. The top drawing uses only the edge of the paper for spatial reference. By the fourth lesson, when overlapping was introduced as a way to describe space, the student's ability to create space on the picture plane greatly improved.
Figure 12. Drawings done one week apart demonstrate use and understanding of overlapping to show spatial relationships.
Figure 13. Using Frank Stella's shaped canvases for motivation, a fifth grader develops his own shaped design.
Figure 14. Lesson six. Louise Nevelson's sculptures influenced this classroom composite piece (in progress).
Figure 15. Sixth graders examine the personal space in their imagination boxes (lesson seven and eight).

Figure 16. Reflections—writing about space (lesson nine).
Figure 17. This imagination box became the personal space of the student artist/owner.
Thanks for Your Help

The world's a brighter place,
a better place to be
because of helpful people
like you!

THANKS SO VERY MUCH

Thank you for being such a good Art teacher
When I first started going to this school I didn't know how to draw. But since you have helped me I know how. Thank you Mrs. Airio.

Figure 18. A Valentine from a fifth grade girl who had completed the sequence of lessons.
**Figure 10.** The chart above and on the following pages, was developed during the unit implementation to assist in assessment. With this chart it is possible to see the student's understanding and use of spatial concepts both within each lesson and in the context and sequence of the unit.
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Unit Reflection
Mary A. Zahner

The organization of space, whether in drawing, painting, or sculpture, is a primary aesthetic concern of artists from many cultures. The social dimension of spatial relationships is capable of involving intermediate age students in actual environments of which they can take ownership.

Intermediate students in Dayton developed a feeling of self-esteem when they took ownership of their personal aesthetic space in an eighteen week unit of instruction developed by Ms. Ayers. Using various approaches to spatial organization, Ms. Ayers led the students to understand the social nature of spatial relationships.

Beginning the unit with a common spatial relationship experienced by all the students, Ms. Ayers asked the students to think about houses in new ways. After brainstorming about houses--some students thought of cardboard houses the homeless live in--Ms. Ayers read A House is a House for Me. After the story was over, one student commented, "It tells us what a house is, but not what a house can be." Ms. Ayers replied, "That's right, we need to use our imaginations. Think of an object, then draw where the object fits." The students quickly set to work. Ms. Ayers circulated around the room and gave the students feedback about their drawings. Five minutes before the end of the period they quietly placed their drawings in portfolios.

After looking at the development of space by various cultures, i.e. Stonehenge and Sunwatch, the students, working in small groups, used wooden blocks to design a structure that would capture the play of light and shadow from a flashlight. While working the students focused on two questions: Why do people so far away from one another do similar things? and, What does space have to do with light?

Students described the shadows cast by the structures. They discussed positive space as where something was. Negative space was a place that surrounded the positive image. Shadows resulted from light cast on a positive shape. After the discussion, Ms. Ayers said, "You have been sitting in these chairs for years. Today you will see them in a different way." In the center of the room was a stack of chairs. The students took turns going up to the chairs and putting their arms through the negative spaces. Ms. Ayers demonstrated how to draw only the negative spaces, the openings. Students watched the demonstration attentively. Before going back to their seats to work they chose paper in complementary colors for the assignment. After selecting the paper, they began drawing. Ms. Ayers reminded them that this lesson was like the first because they were looking at objects in a new way. The students struggled to reverse their thinking: drawing open places instead of outlining objects. The struggle was reflected in one student's comments, "It was nerve racking. We had to think today."
Ms. Ayers began, "What did you think about our lesson on positive and negative space?" A student replied, "It was hard and interesting. Hard, because it was confusing in the beginning, and interesting when you got done." Ms. Ayers walked over to a student. Standing close to the student, she said, "Alex owns this space because no one else can use it. We take ownership of our own space. Last week the chairs owned the positive space and we drew the negative space. Today we are going to draw the outline or contour of positive shapes I have in the center of the room. We will focus on overlapping positive shapes today. Draw the nearest object first. If you make a mistake fix it by drawing another line. Finish one object and then go to another object." Only one student had a problem with adapting the drawing to the mistake. He said, "I lost my drawing, it has too many lines."

"What were we doing last week?" asked Ms. Ayers. The students replied, "Drawing." Ms. Ayers asked, "What was different about the drawing?" The students replied, "We overlapped." Ms. Ayers, "What do you mean by that?" The students, "To pile on top of. To draw what was in front first." After reflective writing about their drawings, the students gathered around Ms. Ayers while she told them about an artist, Frank Stella. With a working knowledge about shaping space, overlapping, color relationships, and using contour drawing, the students were ready to discover that the design and shape of the paper or canvas could be an important part of a work of art. After viewing a slide of one of Frank Stella's protractor series paintings, Ms. Ayers asked, "What are the white spaces in the work?" A student answered, "Negative space." Ms. Ayers replied, "Yes, you are right. And, by changing the shape of the canvas the art work is no longer flat. It has a space of its own. Today I will give you paper and you will change its shape. Inside this shape you will design shapes using paint or markers. The inside shapes should relate to the outside shapes." During the studio segment of this lesson an incident occurred between two students which proved that content and context can join in unified teaching-learning environments. George's painting was ruined when Sam threw water on it. After questioning the two students about the incident, it was found that George first flipped paint on Sam. The ruined work was the result of Sam's retaliation. Ms. Ayers asked, "What was wrong with throwing paint?" George replied, "The work got smeared." Ms. Ayers asked, "Why should we care?" Sam replied, "George worked hard on it and now it is ruined." Ms. Ayers asked, "What happened to George's painting space?" Sam replied, "It got smaller. I got into his space." Ms. Ayers added, "Remember, you own your work space. When you make art you take ownership of your space." Carol, who had been working quietly, said, "This is not just about George and Sam, this is about all of us."
From the shaped canvasses of Frank Stella, Ms. Ayers led the students to Louise Nevelson's forms against a flat surface which defined a limited space. Ms. Ayers said, "I am changing a quote of Louise Nevelson from 'You give the work an image of yourself,' to 'You pass on ownership of your own space.'" After viewing Nevelson's work, the student's were given shallow boxes and an assortment of wooden shapes to construct their own relief sculptures. Before gluing the pieces, the students tried to understand the relationship of shape and shadow, by discussing why Nevelson called herself the architect of shadows. The students needed to solve the problem of building up the interior space of the boxes. To help them Ms. Ayers asked, "What did the chairs do to create space?" The students answered, "They were stacked." Ms. Ayers then said, "Think--what kind of space you will make." The students worked in the confined spaces of their cubicles. These personal spaces were houses for their imaginations.

After receiving a cardboard cubical, each student punctured holes in it, experimenting with the illumination of the interior. They found that light cast in the interior revealed a spatial scenario which compelled the imagination. Referring to a House Is a House for Me, Ms. Ayers said, "Think about your space. What will it be like?" As they worked, one student commented, "I will use light again and again. It's an environment, if you were small enough you could live in it." When the cubicles were completed, the students wrote reflections about their personal spaces. One student wrote,

My place is my own little place. I don't know where it really is but I really do like it there. Going to my place I would wear modern clothes because it feels really comfortable and I don't think I would be able to get used to a different kind of clothes. When I go to my place, yes I will take someone with me, her name is Mary. I would take her because I know she would like to come. At my place it is usually dawn or at sunset. It is really fun there. When I go to my place I am any age, it's fun there when I'm two years old, it's even fun when I'm fifty years old. In my place it is always the temperature I what it to be. In my place it smells fresh and clean like there's no pollution at all, the way I think it should really smell.

Ms. Ayers' thoughtful questioning and the continuity of her unit about space led the student's to a rich aesthetic experience. In his final reflection, one student wrote: "Throughout our first art class unit, I've learned how to use space and how to mix colors using paint. I also learned how to use my time wisely. I also learned how to be more creative with my work..." Another student wrote, "I really think that I have changed in my art ways."

To have ownership of space is to have awareness of self and its relationship to the rest of the world. The students were able to express their thoughts about space, not as an illusionistic convention, but as a catalyst involving them in an environmental experience.