FRANK STELLA: A STUDY OF CONTRASTS

ART and MATH
Grades: 9-12

BASED ON:

Frank Stella (American b. 1936)
Giufà e la Statua de Gesso, 1984
Oil, urethane enamel, fluorescent alkyd, acrylic and printing ink on canvas and metals panels, etched
Gift of the Douglas S. Cramer Foundation, 1998.65

OBJECTIVES:

- Students will examine various geometric 2D shapes and 3D forms.
- Students will study how Stella used 2D and 3D forms to play with a space designed to create aesthetic interest and contemplation.
- Students will study how Stella incorporated other contrasting concepts into his art in order to increase the visual possibilities. For example, he assembled very precise (calculated) hard edge shapes adjacent to free form (uncalculated) organic shapes. Students could search for and list other contrasting concepts Stella used: e.g. 2D/3D, warm/cool, standard/florescent, random/precise, hard-edge/soft edge, positive/negative, free-form/geometric, abstract/realistic, objective/non-objective, straight/curvilinear, separate/overlapping, light/dark, actual/visual, large/small, symmetrical/asymmetrical, agony/calm, classical/fantastic, static/dynamic, divergent/convergent, simple/complex, transparent/opaque, nested/adjacent, etc.).
- Students will assemble a series of mathematical constructs of geometric shapes, which are then used to make templates, and finally folded and glued to produce 3D forms.
- Students will select four examples of such forms and figure their mathematical characteristics of surface area, volume, weight and related characteristics such as number of sides, vortices, angles, circumference, etc.
- Students will then apply the information to make a detailed plan for a "work of art" by accurately describing how another person would prepare and assemble a simplified construct in the "style" of Stella's exemplar noted above.
- Students then exchange their plans with other classmates and follow the directions to reproduce the plan in concrete terms.
- Students will discus how they felt about doing this project, what mathematical problems they encountered and the insights they discovered in the process.

CONCEPT:

Frank Stella's art is seen as an important bridge in American art history between Abstract Expressionism and later streams such as Minimalism and Conceptualism. Note in the exemplar Stella uses spontaneous brush strokes and hard edge shapes. He also combines the flat surface of traditional painting with sculptural elements. Stella sees his art as an expression of his activity of creation. He says, "No art is any good unless you can feel how it's put together. By and large it's the eye, the hand and if it's any good, you feel the body. Most of the best stuff seems to be a complete gesture, the totality of the artist's body; you can really lean on it." Like Sol Lewitt, Donald Judd and Ad Reinhardt, Stella designs space as non-narrative, non-mythical and more akin to geometry than traditional art. Stella says, "But, after all, the aim of art is to create space - space that is not compromised by decoration or illustration, space within which the subjects of painting can live."*

After reviewing the exemplar of Stella's wall sculpture students will *list* the ways he uses contrasting artistic and geometric concepts, will" *play*" with organizing a few of their own into constructions, and will *plan* a "work of art" which incorporates at least one geometric form and its 2D representation or shape. The plan must include sufficient

descriptive measurements so that another student could replicate the work with relative accuracy, using descriptive geometric terms for at least one of the subjects of the abstract construction, figuring its mathematical characteristics of area, volume, and related characteristics such as number of sides, vortices, angles, circumference, etc.

* http://www.brainyquote.com/quotes/authors/f/frank_stella.html

VOCABULARY:

Alternating pattern
Cubism
Conceptualism
Abstract Expressionism
Minimalism

Contrasting concepts: Art

Geometric/free-form
Positive/negative
Light/dark
Warm/cool
Large/small
Shape/form
Standard/florescent
Hard-edge/soft edge
Abstract/realistic
Objective/non-objective
Straight/curvilinear
Actual/visual
Agony/calm
Classical/fantastic
Static/dynamic
Simple/complex
Transparent/opaque

Contrasting concepts: Geometry

Symmetrical/asymmetrical
Straight/curvilinear
2D/3D
Area/volume
Diameter/tangent
Distance/mass
Separate/overlapping
Nested/adjacent/separated
Divergent/convergent
Transformation/tessellation possible advanced applications:
(Translations, reflections, rotations, and dilations of objects in the plane by using sketches, coordinates, vectors, function notation, and matrices

MATERIALS:

- Graph paper and pencil
- Foam core board and exacto tools and adhesive
- Acrylic paints (standard, metallic, florescent etc.)
- Applicators (spraying tubes, brushes)

PROCEDURE:

1. Students will be given a picture of Frank Stella's relief sculpture to analyze by describing as many contrasting elements as they can see. (Stella says, "What you see is what you see".)
2. Students will list the contrasting concepts they find.
3. The teacher will now demonstrate how Stella's work is seminal to American art history by being a bridge from Abstract Expressionism to later Minimalism and Conceptualism.
4. Each student will then play with several examples in sketch form to be later used as additions to their own construction. (Note that if this laying out the design is less exciting than the actual making of your art, you may find a kindred spirit in Stella who said, "When I'm painting the picture, I'm really painting a picture. I may have a flat-footed technique, or something like that, but still, to me, the thrill, or the meat of the thing, is the actual painting. I don't get any thrill out of laying it out.")
5. Begin to select from your sketches a 2D shape and its 3D form (such as a circle and a sphere/cylinder or triangle and a pyramid) and another contrasting concept (such as light and dark) to be used in *your* original relief. (Remember that Stella said, "A sculpture is just a painting cut out and stood up somewhere.")

6. Students will take their shape and related form and fill out a form describing its dimensions and geometric characteristics.
7. The student will then make an example of an abstract relief sculpture and make a plan or pattern sufficiently accurate for another student to understand and follow the directions to replicate your art.

ASSESSMENT:

The student who completes all the list below with distinction = A
The student who completes all of the list below successfully = B
The student who completes most of the assignments successfully = C
The student who does not complete most of the assignments below successfully=Incomplete

1. Discus with a partner all the contrasting concepts you find in one of Stella's reliefs.
2. Produce a sketchbook page describing your findings and examples you would like to include in your sculpture.
3. Include a page that tells how you will make your own relief using at least one shape and its 3D form and one other contrasting concept application.
4. Produce the sculpture using the directions you made and make any amendments necessary for an accurate and workable pattern/plan.
5. Demonstrate a respect for the person and work of your fellow students when giving constructive comments and help.

RESOURCES

Frank Stella http://princetonol.com/groups/iad/lessons/middle/Heather-relief.htm

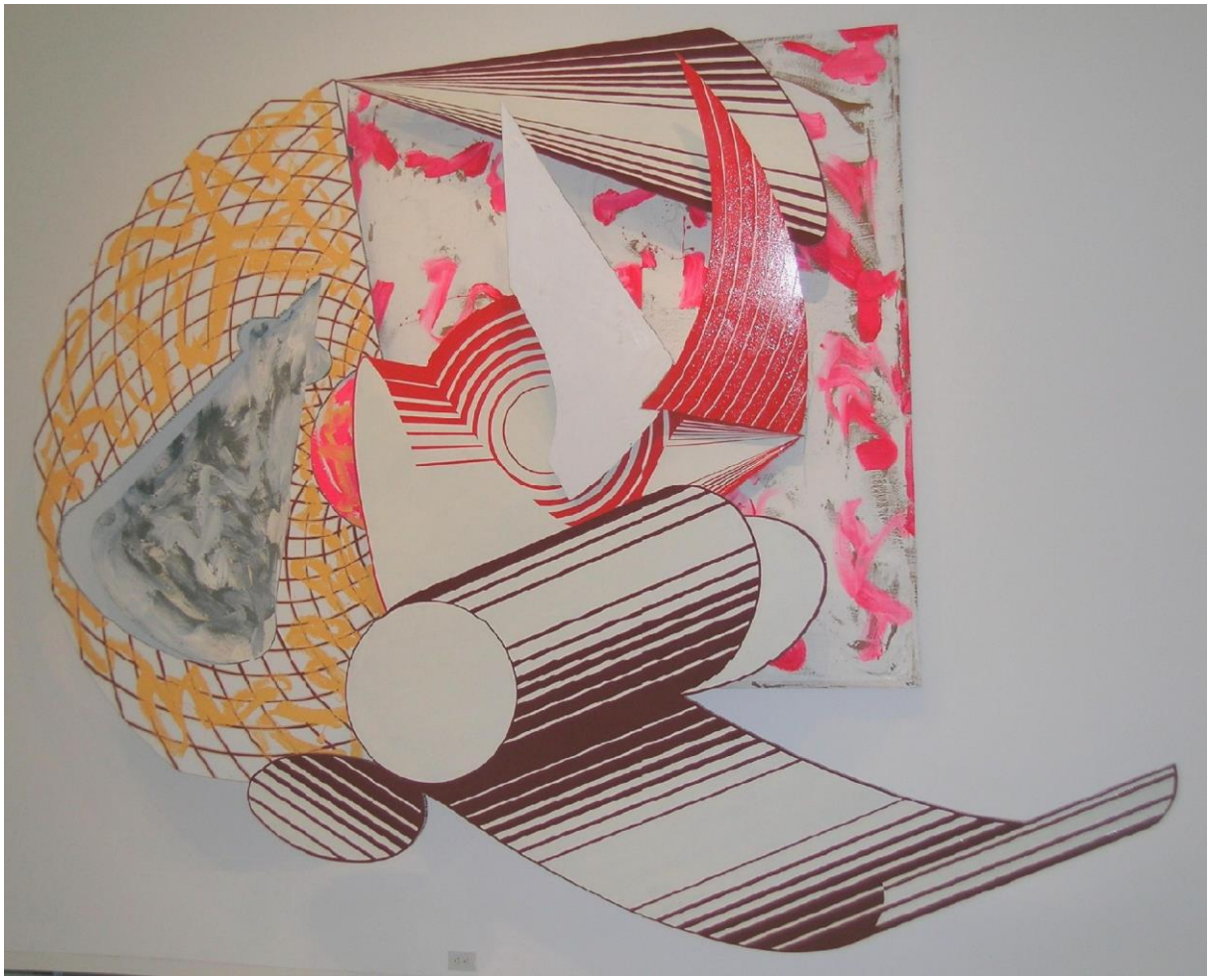
NATIONAL STANDARDS

MATHEMATICS

5. Understands and applies basic and advanced properties of the concepts of geometry

VISUAL ART

1. Understands and applies media, techniques, and processes related to the visual arts
2. Knows how to use structures (e.g., sensory qualities, organizational principles, expressive features) and functions of art
3. Knows a range of subject matter, symbols, and potential ideas in the visual arts



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