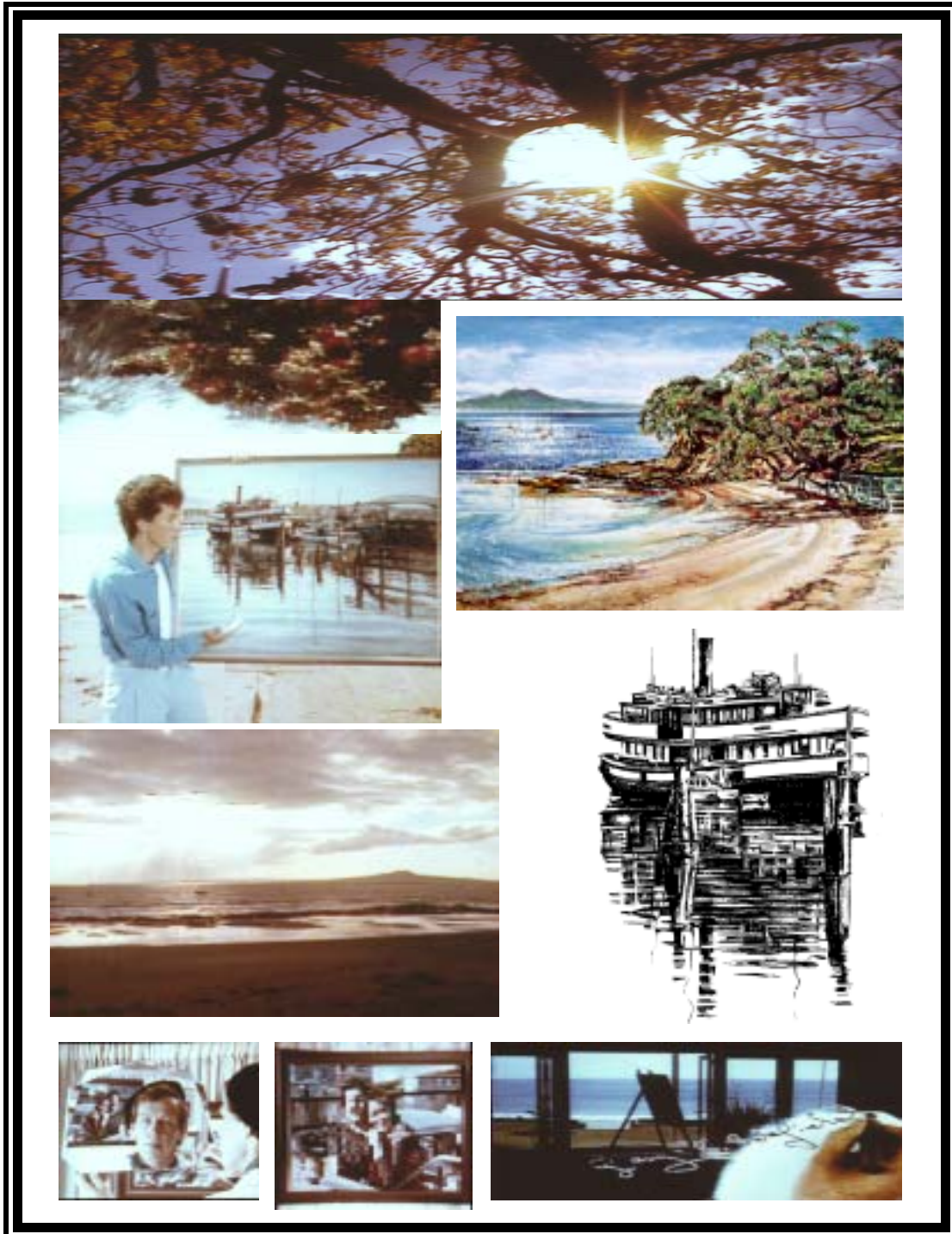


NEW DIMENSIONS

THE ART EDUCATIONAL EXPERIENCE

PART ONE - PAINTING

A STUDY GUIDE AND TEACHERS LESSONS



STUDY GUIDE AND TEACHERS LESSONS FOR NEW DIMENSIONS

PART 1: PAINTING - The Second Dimension

Introduction

The making of Art requires more than just expression. Artists not only *EXPRESS* ideas in work but they must also be able to *PERCEIVE* the world around them.

⇒ What kinds of thoughts are going through an Artist's head when she or he is sitting before a blank canvas?
⇒ Are there any ways we can make painting easier and less daunting?

A good place to start is at the beginning. History is really the product of the creative and destructive process of generations of people just like us. People who had the same wants and questions, and who attempted to solve the same problems. Each picture (we call an art treasure) is like a time machine looking back through an artist's eyes. An artist who may be dead a thousand years can speak to us right now and these masters sat before a blank canvas just like you! They analyzed in their minds thousands of pieces of information and transformed them into an illusion of a three dimensional image.

Impossible? This is what you are doing right now as you glance out the window or your eyes flicker around the classroom. Your mind creates the three dimensional illusion. You just don't realize you are doing it ! You paint with your MIND more than your HAND.

A: OBSERVATION IN THE STUDIO

TEACHER LESSONS

VOCABULARY

EXPRESSION	:	An indication of feeling or statement. An outward presentation.
PERCEPTION	:	A school of Art. Here, used in contrast to an inward appreciation.
FORM	:	Discernment, knowledge, the attainment of understanding.
CHIAROSCURO	:	Shape.
TONE	:	The treatment of light and shade in a piece of artwork.
SUCCESSIVE APPROXIMATION	:	Here the degree of lightness or darkness of a color.
CONTRAST	:	A technique, to continually see and correct mistakes as you are working.
GLAZING	:	Place in immediate relation in order to heighten an effect by emphasizing differences.
IMPRESSIONISM	:	The technique using paint, gel and varnish to create an inner glow and translucence.
	:	Originally a derogatory term. Now a school of art where a scene is represented without strict detail.

ACTIVITIES

• Research activities

Divide the class into research groups or assign the activity for the previous night's homework. Each group researches the effectiveness of lighting in images from various sources:

a) The Newspaper.

Find images that use extremes of light and shade in photography. The students will find that most images will indeed contain extremes of light and shade. This is because:

- ⇒ This kind of lighting enhances the dramatic effect. A photograph in a newspaper plays the role of a headline.
⇒ Contrasting light and shade is technically more easily reproduced on newsprint than mid-tones.

b) Photographs in History

Some of the most dramatic photographic images in History use extremes of light and shade. A good example for discussion is Joe Rosenthal's "Flag raising on Iwo Jima." The contrasting lighting emphasizes the dramatic action and has immortalized this image as a National Icon. Ansel Adams or Edward Steichen are equally good examples.

The most illustrative example of all is the depiction of sculpture by photography. Ask the students: What kind of light source should be used in the photography of sculpture, a soft diffuse light source, or a raking light that would cast defining shadows over a sculpture?

⇒ Answer: A raking light creates highlights and shadows and is a great example of showing the three dimensional form of a sculpture in a two dimensional photograph.

The challenge will be to find photographs that depict scenes through mid-tones. They may find scenes of mist or smoke.

(A technique of softening the features and details of aging movie stars was to place gauze or Vaseline over the lens.)

c) Paintings in History

Find examples of paintings that use extremes of light and shade. The Renaissance painters are good examples of skillful use of Chiaroscuro. As well as Raphael, Michelangelo, and Leonardo DaVinci, mention less known but striking painters like, Caravaggio ("The Ecstasy of Saint Francis" or "the Death of the Virgin") or Titian or even 20th Century's Dali.

Discussion topic: how effective is modeling light and Chiaroscuro in the period before the Renaissance?

⇒ Answer: It is virtually non-existent. There are light and dark parts of the paintings but they are not used to show three dimensional form or light. In fact the works look remarkably flat. Examples are many in Mediaeval, and earlier, icon art. Notice too the absence of perspective, for example "Tres Riches Heures du Duc de Berri", c 1415.

Find examples in History of paintings that use mid-tones and subtle depiction of light.

These are numerous in the Impressionist period in the 19th and 20th Century.

Note: This period has occurred since the invention of photography. Is there any connection between the two?

⇒ Answer: Impressionism's impetus was born as a reaction against photography where color and emotion were more important than structure and form.

Examples: Claude Monet, "the Water lilies," c 1916, is the best example, also Van Gogh, "Irises "1889, most of his portraits, wheat fields and scenes. Consider also Renoir, and Cezanne.

d) Contemporary Magazines and Television.

Finding examples of effective use of light and shade could be one of the more interesting projects.

During the 1960s, 70s and 80s most advertising photography used lighting that did not show the model's features. Very few casting shadows appeared on the faces denoting any structural details. Recently magazines like Vogue, or Calvin Kline advertisements, have been using Chiaroscuro and modeling light to show striking three-dimensional form. MTV and VH1 currently use lighting of this nature. {Interestingly in Ken Burns' "The Civil War" all the interviews are conducted in modeling light reminiscent of the olds masters Chiaroscuro}.

• Lighting a subject's face

A volunteer student sits on a chair either in the center of the room or in front of the class.

Take a light source: either an unshaped lamp or a strong torch.

Dim the light in the room as low as practically possible.

Hold the light source about 12" away from the subjects face so that it illuminates and strikes the face at a 90° angle.

The face should be divided in two with half the face in shadow and half in light. This is technically called "Half Light." Have the students notice:

⇒ The highlight on the side of the nose contrasting with the juxtaposition of shadow on the other side of the nose. (Highlights can be emphasized with the use of face cream enhancing a shine but this is not essential)

⇒ The strong highlight striking the temple and dimming through mid-tones into shadow across the forehead. The light is depicting the form of a round surface.

⇒ The highlighted cheekbone and shadows in the corner of the eyes and around the nose.

⇒ The shadow, as well as the highlight, on the upper lip.

⇒ The highlight along the jaw line and the shapes of the shadows in the corner of the mouth.

⇒ The rounded chin produces often a point of highlight and is shaped by mid-tones darkening into shadow.

⇒ Draw the student's attention to the sparkle of light in the eyes. This is called "the catch light" and can make a portrait come alive.

Now bring the light source forward 45°. This is called "3/4 light" and is one of the most striking in showing three-dimensional form. Draw the student's attention to how the shapes of the shadows on the face have changed. For example:

⇒ There should be a triangle of shadow from the nose across the face.

⇒ There should be a triangle of highlight on one side of the nose.

⇒ There are now shapes of light on the dark side of the face

Can you see the features easier?

Now move the light source directly above the subject raking down the face.

How do the highlights and shadows fall now? Are any features emphasized, for example the nose? Is this more flattering?

(Interestingly the mid-day sun is the outdoor painters' or photographers' problem because it creates this very effect. This is why a photographer will use a fill-in flash in the day time, or a film crew will bring reflecting boards onto an outdoor set.)

Now move the light source directly below the subject.

Scary isn't it?

This is an old method of making the subject appear sinister and foreboding. It is still regularly used in movies.

Example: "Nosferatu," or any horror movie.

- **Utilizing a video camera for portraiture**

Have the students set up a subject in front of a dark screen or area. Place the school video camera on a tripod and have the face fill the frame in a close up.

Very slowly move the light source, (12" away from the subject) from behind the subject around 180° to the front. Also capture the effect of the angles above and below.

Now play back the tape on SLOW speed. With the help of the PAUSE button discuss and draw attention to the changes in the shapes of areas of light and shade on the face.

- **Making a portrait**

Divide the students into groups so that each can easily see a volunteer subject model.

(Either gender is fine for the model but be aware that boys have stronger facial features than girls.)

Each group will need a torch or a stationary light source.

Place the light source so that it shines a 3/4 light on the subject. Each student uses a gray mid-tone board or paper and black and white pastels. (The class can choose what ever medium they feel comfortable using but oil based pastel works best and quickest.)

Ask the students to look carefully at the subject and draw or paint in the areas of light and shade. Use a mirror for the work and the subject to help with accurate perception. The idea is to concentrate on producing a three dimensional illusion and to resist the temptation of outlines in a cartoon fashion.

- **Viewing without detail**

Using a slide projector bring a slide of a landscape out of focus and have the students paint what they see. Then slowly bring the slide into focus allowing the students to gradually add detail to their paintings.

DISCUSSIONS

Discuss tone differences. Point out that by placing tones into a painting the effect can be subtle, extreme or destroyed.

Discuss the creation of perspective by drawing geometrical shapes and using tonal variations.

For example a cube can be represented by a series of lines but also by a series of areas.

Discuss the depiction of reflections in water, and reflections in metal and glass. These can be represented by the close proximity of light and dark tones. (See the front cover of the lesson guide.)

Discuss why a mirror can help in perception. (A mirror can add a fresh point of view and enable the artist to see errors of line and angle)

Discuss and perhaps suggest the students try experimenting with mixed media. For example: use oils with oil pastel, watercolor with soft pastel.

STUDY GUIDE

HERE ARE SOME THINGS YOU KNOW (but you may not know you know) :

- ***IT IS LIGHT AND SHADE, AND NOT COLOR, THAT GIVES FORM.***

There is an example in the program of a painting showing three-dimensional form even when all the colors are faded to black and white. This is obvious, but think about it. If it is not the color that is creating this illusion it must be something else: IT IS THE PLACEMENT OF THE AREAS OF LIGHT AND SHADE.

- ***EVERY COLOR ALSO HAS A HIDDEN DEGREE OF TONE (LIGHTNESS OR DARKNESS).***

Freeze-frame the example in the video of color areas. The two left-hand areas appear strong and bright. The red is powerful and could be used effectively in a painting.

Now move ahead to the black and white image. Surprise, we see clearly that the red was really quite a dark tone. It would be difficult to use this color as a highlight. The lightest color was really the right hand side yellow and most tones were so average they were barely noticeable in the black and white. DON'T BE FOOLED BY THE RICHNESS OF COLOR IT IS THE DEGREE OF LIGHT AND SHADE THAT WILL DETERMINE THE FORM.

- ***THE MORE EXTREME THE TONES THE STRONGER AND BOLDER THE IMAGE. IT REQUIRES LIGHT TO EMPHASIZE DARK AND DARK TO EMPHASIZE LIGHT***

Rembrandt used extremes of tones for strength, power and a strong three-dimensional effect. The program illustrates visually the effect of placing dark tones next to light. The effect is dramatic and creates the illusion of raking light and solid forms. This is called Chiaroscuro. (Interestingly in the 19th Century a whole school of painting emulated Rembrandt but produced dark and gloomy pictures. They didn't realize the varnish had aged and darkened all Rembrandt's highlights. With today's restoration we can clearly see his striking use of Chiaroscuro.)

Are the paintings behind the host examples of mid-tones or examples of extremes of tone?

⇒ Answer: They are examples of extremes of tone.

Turner is a good example of an artist who often painted with mid-tones and not extremes of tone. There was little difference between his lightest highlights and his darkest shadows. The effect here is misty, soft, and subtle.

Realize both painters were called "The Master of Light." Each has simply a different approach. Many beginners, however, often spend hours very carefully painting the picture piecemeal with light and subtle detail only to spoil it with a dark or light background or object. An extremely dark background, for example, will tend to overpower any subtle differences of light and dark and flatten the picture back into two dimensions (as seen in the program in a real example).

YOU WILL FIND IT EASIER TO PAINT THE WORK AS A WHOLE SETTING THE HIGHEST AND DARKEST TONE EARLY IN THE PROCESS.

- ***WE DO NOT PERCEIVE THE WORLD AS A MASS OF LINES.***

We do perceive the world as shapes of areas of light and shade so why do we make it harder on ourselves by adding an extra step. If we try to make a portrait of the person sitting next to us using only lines we are only deluding ourselves if we draw a modified "smiley face." We do not see a "smiley face" we see areas of light and shade. The "smiley face" (although cute) is helping to prevent us seeing what is really there. Furthermore, the lines will draw themselves. The lines are the boundaries between the areas of light and shade. Even better, if you accurately perceive the shapes of the areas, of light and shade, the perspective will also draw itself!

Watch the example in the program using the image of Sir Edmund Hillary. Features become inferred not delineated.

This is actually what the master painters were mentally doing, seeing these areas of light and shade in nature.

- ***BY CONTINUALLY CORRECTING MISTAKES THE PAINTING BECOMES PROGRESSIVELY BETTER.***

This technique is called "successive approximation" and is a valuable tool for any of the Arts. Some writers call this inching in." Some musicians sculpt and refine their chord progressions and melodies. This is the same technique with a different name. THE PAINTER MUST CONTINUALLY SEE AND CORRECT MISTAKES, WHILE WORKING ON THE PAINTING AS A WHOLE LEAVING THE DETAILS UNTIL LAST.

IMPORTANT THOUGHT TO LEAVE WITH THE STUDENTS.

Pay attention to everything you take for granted. Take note of how the light falls on objects: the shapes of shadows on a face, back lighting around trees in the fall, sparkles on water at sunset and even the soft shadows on a white egg.

B. APPLYING THE TECHNIQUES TO NATURE

TEACHERS LESSONS

VOCABULARY

LINEAR PERSPECTIVE	:	Illusion of space on a flat surface by drawing lines that converge at a set horizon point.
ON LOCATION	:	Painting at a site not in the studio.
HUE	:	The color, the tint, the “richness” of color.
COMPLEMENTARY COLORS	:	Colors that lie across from each other on the color wheel. Colors that are the most effective and contrasting to each other.
PRE-RAPHAELITES	:	A group of English artists, from the 19th Century who attempted to revive the style of Italian artists before the time of Raphael. Here their reverence for nature had them painting even every vein in every leaf.
PROPS	:	Short for “properties.” As in play objects used to help set a scene.
PRECONCEPTION	:	To form an idea in advance. To pre-judge. Prejudice.
PALETTE	:	A thin, usually oval board with a thumb hole, on which painters mix their paints.
DISASSOCIATE	:	Separate. Here to look afresh.
COMPOSITION	:	Here, the way in which the parts of a painting form the whole. The balance and harmony between objects in a picture.

ACTIVITIES

• **Research activities**

Divide the class into two research groups. Each group researches the effects of color from various sources.

a) Daily life

This group looks through magazine advertisements and takes note of the predominant colors.

What colors are most often used, primary or secondary? Present examples and make a case for your findings.

⇒ Answer : Both primary and secondary colors do appear but there is a surprisingly high proportion of primary colors in advertising.

Do certain colors try to evoke a mood?

⇒ Answer: Certainly, almost all colors evoke a mood but this is a cultural and learned association. There is nothing inherently calm about blue, dangerous about red or disturbing about yellow but a calm sea is blue, blood is red and road markings are yellow.

Do certain colors or combinations try to evoke status or professionalism while others flamboyance or childhood?

Answer: Consider the “Royal Purple” the “ Red Carpet” or “the Dark Blue Suit.”

(Interestingly in ancient times purple and red were produced from Phoenician shellfish and were very expensive.)

How often do soft pastel colors appear in Advertisements?

⇒ Answer: almost never.

FROM THIS WE CAN DISCUSS AND DEDUCE THE PERCEIVED IMPACT OF COLOR ON THE PUBLIC.

b) Paintings in History

This group looks at the effect of complementary color in painting. Have the group find examples of paintings that use the close placement of complementary colors. Students can use a color wheel to help identify complementary colors but explain to them this trick:

Stare at a block of color for 30 seconds then at a white piece of paper. The color that appears is complementary.

Red is complementary to Green.
Purple is complementary to Yellow.
Blue is complementary to Orange.

(Interestingly any two complementary colors mixed together will produce no color: gray or black.)
Students will find red and green the most frequent examples and will have to be resourceful to find the others.
Each color makes the other appear more vivid and the painting more striking. Many great examples spring to mind especially in the modern and impressionist period:

Helen Frankenthaler "Scarlati" 1987," Mary Mary" 1987	Van Gogh "Undergrowth with two figures" 1890
Ellsworth Kelly "Red, Blue, Green" 1963	Hans Holbein "The Ambassadors" 1533
Henry Matisse "Red Room" c1908	Gauguin "Ia Orana Maria" 1891
Andy Warhol "Four Campbell's Soup Cans" 1965	Van Gogh "The Night Cafe" 1888

- **Students scrutinize themselves**

Both groups during their breaks or after school take statistical notes of the colors students are wearing.
Is there a most popular color?
Is there a second most popular color?
Are the colors primary, strong, weak, soft, bright, or pastel?

- **Students scrutinize their homes**

For homework the students take note of the color of their furnishings at home. (In the unlikely event of any embarrassment the information can be submitted anonymously.) Colors in the lounge:
What colors are the carpet, the drapes, and the lounge suite?
What is the predominant color in the pictures on the wall?
Is there a random jumble of colors or are some colors more likely to appear than others?

DISCUSSION

WE SELDOMLY EVEN NOTICE THE COLORS IN THE WORLD AROUND US.

What we consider to be normal is really arbitrary, and changes with the whim of fashion from generation to generation.

For example in the 70s greens, oranges, browns, the so called "earth colors" were very popular and most students from that era would have found them in this survey. In the 80s purples, turquoise and soft pastel colors became more popular in fashion and in decor. Now in the mid 90s popular colors are becoming brighter and stronger. {Interestingly it is surprising how easily we can subconsciously date an old movie by the color of the decor}

Most pictures are chosen by their color and their suitability to the decor! (This is not necessarily a good thing.)

- **Painting on location**

On a sunny day take the class outside with some pastels, something to press on, and two small pieces of Art paper approximately 11" X 8 1/2".

Observing the sky from its lightness at the horizon to deep color overhead have the students accurately paint the sky from horizon up paying attention to accurate color portrayal. (White will also be an important material here.)
Now on the second piece of paper paint a nearby tree, paying attention mainly to the color. (Tree trunks are usually shades of gray, not brown.)

Next have the students paint the tree as it would distantly appear against the sky of the first picture.

THE SECRET: The secret is to draw in a dark land horizon and then realize the tree will be small and mostly silhouette.

MOST OF THE COLORS OF THE TREE WILL BE SHADES DARKER.

- **Making a viewer**

Have the students make five viewers of dimensions 6" X 4 and 1/4". If there is some danger with using blades to cut cardboard the teacher could easily make five viewers and divide the class into five groups.

Go outside and find a semi-natural scene within the school grounds. You will find that there is always something to spoil your scene, a bike rack, a building etc., but the viewer can extract a scene from a scene.

Take the viewers and, without consulting between groups, have each group produce a sketch through the viewer of a scene. THE SKETCHES MAY BE DIFFERENT EVEN THOUGH WE ALL STARTED WITH THE SAME SCENE!

Everything we see we see pictures within pictures. The viewer helps the student see if the balance, or the material, works BEFORE she, or he, paints it.

STUDY GUIDE

• ***PAINTING ON LOCATION***

Painting on location in spite of the fresh air, can become a nightmare. The light changes the water alters, wind tears your paper and flies can stick to your work. There are really no rules in painting, and photographs and sketches can become wonderful guides whether the artist is at the scene or not.

Throughout history Artists have devised many plans to aid their creative process:

- ⇒ Gauguin sent to Paris for photographs of the South Sea Islanders his paintings made so famous (even though he happened to be in the South Seas himself at the time).
- ⇒ John Constable made sketches on the lids of cigar boxes, returning to the scene at the same time each day. Roberts and Van Dyke used props in the studio.
- ⇒ Turner staunchly advocated location painting to the point of claiming he had been tied to the boat's mast to paint "The Snow Storm."
- ⇒ Millais had a model lie in a bath for two weeks in order to paint "Ophelia," c1852, while other Pre-Raphaelites were said to have dug trenches so they could sit as close to the foreground as possible.

The point here is that the student should not feel that she or he is being any less creative by using props or guides to help. On the contrary the great artists through history have done this! Some, on occasion, have not even been truthful about their approach.

• ***COLOR ANALYSIS***

The important thing here again is PERCEPTION. The difference between what we think we see and what we actually see can be vast. If we were to randomly take someone walking down the street, put a paint brush in their hand and ask them to paint a tree. Invariably the tree will probably have green leaves and a brown trunk.

Tree trunks are predominately shades of gray and not brown! Furthermore take a leaf from a tree and place it next to some green paint. The leaf appears almost gray in comparison.

- ⇒ The key to accuracy is therefore to disassociate ourselves from our PRECONCEPTIONS. Look afresh, forget what you think you see, think and look again without your preconceptions. Look and then look deeper, stare at the scene and think: What colors are really there?

• ***THE PALETTE***

Many inexperienced artists believe that by having a vast collection of all different colors choosing paints will be easier, painting will be simpler but the opposite is true. The more paints you have the more complicated geometrically it becomes. Nearly every color you can think of can be created out of only a handful of primary colors.

Three **PRIMARY** Colors RED, YELLOW, and BLUE, combined make **SECONDARY** colors ORANGE, PURPLE and GREEN:

RED/YELLOW/BLUE	together make	BLACK
RED/YELLOW	together make	ORANGE
RED/BLUE	together make	PURPLE
BLUE/YELLOW	together make	GREEN

In turn every one of these colors can be recombined. SO SHORTAGE OF COLOR IS NOT THE ARTISTS PROBLEM. Practically, an artist can easily get by with a White, Black, and a warm and cold version of Green Brown, Blue, Red, and Yellow. KEEP THE PALETTE AS SIMPLE AS POSSIBLE.

• ***THE EFFECT OF COLOR IN A PAINTING***

Color is one of the most powerful of the artists' tools. It can make the viewer feel warm or cold, quiet or disturbed even happy or sad. The program uses the impressionists as a good example of this. The impressionists were very concerned with the EFFECT the painting would have on the viewer. They were interested in expressing emotion and feeling in their work and color was often the vehicle to do this.

Too often we look around us and see “the sky is blue” “The grass is green” without really seeing or thinking at all! What color blue is the sky? Well actually it is several different colors of blue and changes throughout the day. It is a light color near the horizon sometimes not blue at all. Sometimes it has shades of purple sometimes white sometimes gray even yellow at the horizon. As our eyes move higher there is a deeper blue, and in some seasons there is a deep purple-blue hue.

⇒ CHANGE THIS MINDSET. For example try an analytical approach: Think warm blue forward, cold receding. The program illustrates this idea with the visual example of Monet. The painting seems so real that you could walk into it. The red hits you in the face while some blues recede. Blues can also create a cold and clinical atmosphere in a painting.

Remember that light has a different quality in different places. The light of New Zealand, for example, has high levels of Ultra Violet light. The light of Florence, however, was captured with its soft orange quality in the Renaissance.

- **THE SECRET IS TO DISASSOCIATE THE OBJECT FROM THE PRECONCEPTION.**

Instead of thinking “tree” think, for example, “Emerald green.” Don’t think “Seaweed” think “Vandyke Brown.” As in the tone value section the student is instructed to disregard preconceived notions and re-analyze the image. The student can then learn to see the true colors of the object rather than the bland perceptions he or she might have had.

- **COMPOSITION**

Or: Why do my photographs never look as good as the scene was in real life?!

⇒ Answer: We perceive reality in many different ways. We hear, smell and experience the scene as well as just see it. Also, when we look out at a scene we are actually comprehending 180 ° of vision. Your photograph or painting has at best captured only a token gesture of all of this.

Knowing this, the program suggests “a viewer” to help the artist compose the picture and select the part of the scene that will work most effectively. (Interestingly consider modern techniques in television where an actor’s close up can often fill the entire frame.)

THE SCENARIO

The representational Artist sits in front of the blank canvas in the same way painters through History have done

The Artist chooses a mid-tone not a white material so highlights and shadows will immediately give form.

All the universe is pared down to one subject because too much choice can be counterproductive.

A viewer of the scene is used to help composition. Perhaps photographs of the scene can be helpful.

The Artist remembers “Light is Everything” and makes the light a vehicle to show the forms.

The Palette is chosen: A simple palette, perhaps pastels, a medium to get quick results.

The Artist keeps a mirror nearby.

The Artist works on the painting as a whole.

The Artist notes the relationship between shapes and tones.

The Artist approximates the position of objects.

The Artist corrects obvious mistakes of line and angle.

The Artist is not afraid to stand back and look at the work from a distance.

THOUGHT TO LEAVE WITH THE STUDENTS

Dogs see the world only in Black and White. How would life be different for us if there were no color?

NEW DIMENSIONS

THE ART EDUCATIONAL EXPERIENCE

PART TWO · SCULPTURE

A STUDY GUIDE AND TEACHERS LESSONS



STUDY GUIDE AND TEACHERS LESSONS FOR NEW DIMENSIONS

PART 2: SCULPTURE - The Third Dimension

Introduction

Frightening isn't it? We have yet another physical dimension to capture! Perhaps this is not really so difficult. After all we sense, experience, and live in the third dimension. We also have another sense to help us. It is called touch.

- A. This program is designed to heighten the students' awareness of reality and to relay that world into a three dimensional form through sculpture. The student is not only encouraged to unlock the messages and emotions from sculptors past, but also to make their own contribution to humanity's statement.
- B. Should the teacher require a 15 minute, visual, step by step, **DEMONSTRATION OF THE LOST WAX BRONZE PROCESS**, it can be found at 10 minutes through 25 minutes of this program.

TEACHER LESSONS

VOCABULARY

THE HUMANITIES	:	Fields of learning including the arts, history, literature, and philosophy.
THE RENAISSANCE	:	Rebirth. From the French, Re-again and naissance -birth. The European revival of the arts in the 14th to 17th Centuries.
THE PARTHENON	:	An ancient Greek temple dedicated to Athena the goddess of wisdom.
MODELING	:	Here, to create form by the process of both adding and subtracting clay or wax.
NEOCLASSICAL	:	A style, appearing in the 18th Century, reviving the classical period.
TACTILE	:	Tangible, capable of being touched.
MOLD	:	The cavity in which anything is cast and receives its form.
PLASTER OF PARIS	:	A white powder that sets quickly when mixed with water.
SLURRY	:	A liquid containing solids in suspension.
SLAG	:	Impurities removed from melted ore.
PATINA	:	The color change of a bronze surface either from aging, chemicals or heat.

ACTIVITIES

- **A field trip to a bronze foundry**

A field trip to a bronze foundry can be extremely enjoyable and educational for students, especially if the foundry also deals in artwork casting. As you can see the process is dramatic and captivating. It illustrates:

- A. An academic understanding coming to life;
- B. The practical endurance required for creativity;
- C. One of the many arts-related, vocational opportunities that exist.

(Other examples of these include the photography, the fashion, the advertising, and the television industry. The student may find creativity without necessarily becoming a struggling, self-employed artist.)

In my experience foundry crafts people, especially those who cast Artwork, are invariably dedicated and enthusiastic about their craft. Have the students take notes, not only on the process, but also on negative and positive impressions. Discuss.

- **The creation of a portrait Sculpture**

This is colloquially called a "Bust" but we are really going to create a head and neck. A "Bust" actually includes part or all of the subject's shoulders. Depending upon the school's resources and availability of clay, divide the class into either groups, or pairs. The secret to success here is the proximity of the sculptor to the model so pairs are ideal, with one student becoming the model, and one the sculptor, (reversing roles in a later session.)

- ⇒ Again a life size work is ideal but resources may permit only a three-quarter size sculpture.
- ⇒ Be very aware of the lighting in the room. One light source is ideal. For example the afternoon sunlight raking through the window will help to accentuate the features.
- ⇒ PLEASE CONSULT teachers activity, "**Lighting a subject's face**," in New Dimensions "Part 1 Painting" guide. The technique and perception required is exactly the same.

- ⇒ Mass out the head and neck into an approximate recreation of the subject. Use the nose cheekbones and forehead to proportion the size of the head. Use the chin, jaw, and ears to proportion the neck and back of the head. When you think you have this correct, place the sculpture next to the model and look at both of them from above.
- ⇒ Using **SUCCESSIVE APPROXIMATION** continually refine the features continuously referring to the subject. When profile is worked have the subject in close proximity to the sculpture also in profile. Slowly work down the list of points to note on page 4, **Observation**.
- ⇒ Now the teacher shares a mirror with each sculptor. They will be completely surprised by what they have missed about the subject. They will be even more surprised when they view the subject in the mirror. Have them continue working and complete the details only after the sculpture is structurally correct.

TECHNICAL NOTE: Unless sculptures are hollowed out and the clay prepared without air bubbles they can explode during firing. It may be best to let the pieces dry out slowly instead, and let the value and time of the lesson emphasize the experience of sculpting.

- **Research on sculpture in history.**

Divide the class into five groups. Each student in each group researches a sculptural period in history, and chooses one sculpture that she or he feels is the best sculpture and the best representative of the period. The students should write down their reasons and present them to the group.

Each group must decide on only one example of the best sculpture, and decide unanimously, presenting their choice with reasons to the class. (It will become apparent to the teacher when to drop the unanimous requirement.)

Next the class must be persuaded as to which period they prefer and why.

This is an excellent exercise, not only familiarizing the student with the historical material but also giving the opportunity to present a reasoned or emotive view.

The time periods are:

- ⇒ **The Ancient World**

The classical period in Greece and Rome produced striking but mostly “statuesque” works. A fine Sculpture is “the portrait of Demosthenes” by Polyektos, c280 B.C. or “the discus thrower” by Myron. Try to find work that portrays emotion. Do not forget to also consider work from other regions: The colossal Winged bulls of Assyria, “Mayan Sculpture, or “Tutankhamun”. Consider the remarkable “terra-cotta warriors” in China during this period. Is there a link between culture, the after life, and sculpture?

- ⇒ **The Middle Ages**

Most surviving work from Europe in this period is church related. Is this a coincidence or a reflection of life at the time? Consider some of the many extraordinary examples of Gargoyles from Europe in this period and compare with Japanese work like “ the Sage Kuya” with its dramatic realism.

- ⇒ **The Renaissance**

In Europe the flowering of the Arts has made it hard to choose between so many: Donatello, Michelangelo and others. This work is so inspired the sculptures appear to be capable of movement. Also consider other countries; the jade Buddhas from the East or the bronze Shivas from India.

- ⇒ **Impressionist period**

This period produced works that expressed emotion and suggested features. Rodin was captivated by the appearance of light striking a surface and his work should be considered for this category. Especially “The Thinker” and “The Kiss.” His figures in “The Burghers of Calais” represent the emotions: resignation, despair and defiance. Another suggestion is Degas’ “ Ballerina”.

- ⇒ **Contemporary Sculpture**

This century has seen a reaction against realism. Art and technology have intertwined and global wars have shaped statement and vision into essential elements of Art.

Consider the rise of: Cubism: Picasso, Environmental Art: Christo, Minimalism: Barbara Hepworth and Henry Moore.

Consider Abstraction as Brancusi’s “Bird in space” suggests the essence of a soaring bird without sculpting a single feather!

DISCUSSIONS

What role does stereoscopic vision play in sculpting?

⇒ We all know the further away an object is the smaller it looks. If human beings each had only one eye this would be the only way of perceiving how far away an object is. Having two eyes gives the brain two slightly different images to compare. The left eye sees more of the left side of an object and the right eye sees more of the right side. This enables depth perception. This ability allows you to perceive the relief detail on your subject's face.

What does the program mean by: "A Bronze is a bronze, to the universe but a Bronze is a Bronze to mankind?"

⇒ Bronze is an alloy of Copper and Tin, and so to the universe, (or to dispassionate physics) a bronze sculpture is just a mixture of two metals. However a Bronze sculpture can portray a grimace, a smile and contain the hopes, vision, and essence of humans on this tiny planet.

STUDY GUIDE

Lyrics to "You Turn to Stone"

Traveling in time we wait for the sign
from "the man who never was."

You see with your eyes but you miss
what a touch can begin.

Trapped in the marble and mortar broken pieces of rock that forever
was as the Phoenix will rise from the ashes to fly on the wing.

You turn to stone,
When I look at you.

Frozen in rock though the secrets lie deep in your heart
You turn to stone and I know the feelings gone.

- **HISTORICAL BACKGROUND**

After the fall of the Roman Empire, Europe fractured into small warring regions. Most surviving art from that period comes to us from isolated fortress monasteries. Without the free flow of ideas, technique, and science, many ancient disciplines were lost. (Interestingly even the steam engine had been invented in Ancient Greece. Imagine the industrial revolution thousands of years early if it had not been for slavery!)

The Dark and Middle ages had poor understanding of linear perspective or chiaroscuro, but archeological excavation in the 15th Century began an exciting rediscovery of the knowledge of the ancient world. That is why this period is called the "Renaissance." It means the "Re birth." The program ties Michelangelo with the excavation of the Roman sculpture "Laocoon" to illustrate these concepts.

- **A FALSE ASSUMPTION**

We are easily influenced by visual images and especially movies. Many people's impression of Ancient Rome is Hollywood's impression, with white marble sculptures and harsh, cold columns. This is quite wrong. The paint had simply not survived the centuries. These were painted using many bright colors!

Why did so many classical sculptures have those smooth, "blind eyes"?

⇒ Answer: Because the pupil and iris were usually painted over them to look real. The finished work looked more like a mannequin.

- **ACCURATE SUBTRACTION**

Imagine the physical endurance sculptors needed to carve in solid marble, and without making a mistake. Once a piece is removed you could not put it back and so the technique is called **SUBTRACTION**. (Interestingly today, with modern technology, marble can actually be cast.)

- **THE SECRET**

The secret is to imagine the form trapped within the solid rock and to "release" it. The program uses a number of examples of finished and unfinished works. The best known is Michelangelo Buonarroti's "David." (Interestingly Leonardo Da Vinci's "Mona Lisa" was really a portrait of himself as a woman!)

David is about to battle Goliath and is a wonderful example of stone having the potential to move. The figure represents towering, pent-up energy and passion and yet is made of rock. Earlier sculptors had been content to just portray nature, beauty, and serenity but Michelangelo had moved beyond this. Have the

students notice the veined hand, the tension in the face, and the inner life but then realize it is just an illusion. It is only a physical piece of rock.

- **MODELING**

Using ADDITION and SUBTRACTION is called MODELING. Addition is what you would expect adding material to a sculpture. Many people, even to day, think sculptors carve in bronze. Bronze is cast! This means a sculptor can model in clay using addition, as well as subtraction, and then cast the sculpture into a detailed Bronze. Believe me, this is much easier!

- **PERCEPTION**

The program then illustrates a live modeling of the co-host. The important theme here is again **PERCEPTION**. How does the artist approach his work? Perception is the key. Just as we think we see our surroundings clearly, we are just as mistaken when we look at each other! (Interesting how difficult it is to form a composite police style portrait of even someone we know quite well.) WE ALSO SCULPT WITH OUR MINDS MORE THAN OUR HANDS.

- **OBSERVATIONS**

(Get as close to your subject as is socially possible.) The program itemizes points to be aware of and explains what is going through the artist's mind as he sits before the subject.

1. The corners of the eyes are deep.
2. Lips are fuller than imagined and this gives an indentation above the chin and on either sides of the nose.
3. The temples are deep.
4. There is a deep cleft in the upper lip and on either sides of the nose.
5. An important angle is the jawline.
6. The ears are level with the nose.
Imagine the head shape under the hat or hair. (It is surprising how many people want to use a fork to rake through the hair, or texture it with ridges and rope. Hair is very fine, look deeper.)
7. Position the cheekbones and notice their width to the nose for the positioning of the eyes.

DON'T FORGET YOU ALSO HAVE A VIEW FROM ABOVE AND BELOW.

- **PRACTICAL APPROACH**

Work on the sculpture as a whole and work life-size if you have a choice. Approximate the nose, jawline, and hair early. Use a mirror. Sculpting is very tactile and you can use this sense to help you further.

Feel the dimensions of your own face, for example. Use "Successive Approximation" and do not forget to consider the profile as often as the full face. If you have the angles and proportions correct the likeness will appear.

- **THE ANCIENT LOST WAX BRONZE PROCESS**

Bronze casting is literally thousands of years old. In China even 4,000 years ago both ornaments and weapons were being cast in bronze. It was in the Chou period in China (1100 -250 B.C.) that Chinese craftsmen had perfected these process to surpass the refinement of any in the world.

From the sculptors point of view casting in bronze can be practically very much easier than either:

- ⇒ Working in metal. This requires, welding equipment, safety equipment, and perhaps even a furnace, or
- ⇒ Carving in solid rock. This requires heavy equipment, safety equipment and can be a health hazard.

Because the "lost wax" is a technical process the sculptor can choose to work solely in the clay and wax leaving the rest of the work to the skilled crafts people .In this way the sculptor may need only clay, wax, a knife, and a candle!

- 1) a. First a mold of the sculpture is made. There are many available techniques. The essential requirement is a material that will set to a solid from a liquid. The program chooses silicon rubber as the material.

- b. The sculpture is covered with clay a couple of inches thick. Each half of the sculpture is covered independently.
 - c. Plaster of Paris is mixed with water and, within 15 minutes, a heat generating reaction begins to form a solid.
 - d. During that 15 minutes plaster of Paris covers the clay that is covering the sculpture. Again this is done in two sections, and a pouring hole is left on each side, exposing the clay.
 - e. The two Plaster of Paris halves are opened and the clay is removed from one side exposing half the sculpture. (The other half of the sculpture remains embedded in the clay, which in turn is covered by the plaster casing.)
 - f. The plaster sections are reassembled and molten rubber is poured into the cavity onto half the sculpture.
 - g. When cooled the plaster halves are again opened and the rest of the clay removed. (The other half of the sculpture is now embedded in the rubber)
 - h. Molten rubber is now poured into the other side and left to set.
 - i. The two plaster halves are opened again. The sculpture is gently removed and our mold is completed.
- 2) a. Next a hollow wax cast is made from the mold.
 - b. The two halves of the mold are bound tightly together.
 - c. Wax is melted and poured into the mold.
 - d. The wax cools from the outside in and so by now poring out the wax we are left with a hollow wax cast. The longer the wax is left in the mold the thicker the hollow wax cast.
 - e. The wax cast cools and is gently removed from the opened mold.

Many sculptors find wax great to work with. The smallest and most refined detail can be shaped in wax. A hot knife can seal, flatten, craft, or ripple. (Interestingly the author was working on an important bronze commission when during a cold winter the wax head fell and shattered into dozens of pieces. With only a knife, and a candle to heat it, I was able to completely assemble the work with no fracture lines.)

- 3) a. First draining and pouring channels are made and melted on to the wax sculpture.
 - b. Next the wax is dipped into a SLURRY. Slurry is a suspension of very fine ceramic particles in liquid.
 - c. The work is left to dry and then dipped again, this time into a suspension containing coarser particles.
 - d. This process is repeated many times until a thick ceramic casing is built up.
 - e. The casing is then fired at 700 degrees centigrade. The wax melts and drips out of the casing leaving the empty, fire-hardened shell.
- 4) a. Bronze is melted and prepared for pouring. A deoxidant is added. This chemical removes oxides of metal that are impurities. SLAG is skimmed from the top of the molten liquid.
 - b. Next molten bronze, at 1200 degrees Centigrade, is poured into the ceramic shell through the pouring cup and channels.
- 5) a. The cast bronze is left to cool. This takes a surprisingly short space of time as metal has a low specific heat.
 - b. The work is physically broken out of the shell. At this stage the cast sculpture requires a great deal of finishing.
 - c. The SPRUES or remnants of the pouring channels are removed. (Don't forget that these wax channels we made have now also been cast in bronze.)
 - d. The many small ridges or spurts of bronze, FLASHES, must be removed with tools with names like FETTLES and TREMBLES and the sculpture wire-brushed.
 - e. The PATINA or coloring of the Bronze is done. The effect of chemicals and moisture in the air will color the bronze anyway but in ugly spots and patches. The Artist steps in to create a pleasing creation of color. (Nitrate chemicals produce a green color, Sulfide chemicals will produce a brown and scorching the bronze can combine the copper with oxygen in the air to give a red/ orange color to the metal. Note - in all cases it is the Copper in the Bronze that is the reactant metal.)

- f. Finally the Sculpture is heated for the last time but just enough to melt a covering of wax. This wax covering protects the sculpture's patina from altering or degrading and creates a beautiful finish to a work that can last for centuries.

IMPORTANT THOUGHT TO LEAVE WITH THE STUDENTS

When we look back at sculpture through the ages realize we are only seeing work that has survived. It may sound obvious but think of what this means. Cultures that favored working in wood to stone are not well represented. Most of the great works are lost.

NEW DIMENSIONS

THE ART EDUCATIONAL EXPERIENCE

PART THREE · CULTURE

A STUDY GUIDE AND TEACHERS LESSONS



STUDY GUIDE AND TEACHERS LESSONS FOR NEW DIMENSIONS

PART 3: - CULTURE- *The Intangible Dimension*

Introduction

How is art bounded by its physical dimensions?

⇒ Answer: Art is not bounded by its physical dimensions.

- I. This program discovers **the first dimension** and then takes the students further in their understanding. Art can mean much more than three dimensions express, because art is an object that COMMUNICATES.
- II. Culture can give art even greater significance than three dimensions. Spiritual ideas can be expressed through art and unspoken references made from different time periods and philosophies.
- III. Finally the program challenges the students even more: EVERYTHING WE SEE AND EXPERIENCE, THE ART WE ENJOY, THE GAMES WE PLAY, OUR ENTIRE APPRECIATION, IS FILTERED THROUGH THE CULTURE IN WHICH WE LIVE.

Should the teacher require a 3 + 1/2 minute, visual, step by step, **SUMMARY OF THE LOST WAX BRONZE PROCESS WITH PATINA AND FINISHING**, it can be found 7 minutes into this program.

TEACHERS LESSONS

VOCABULARY

THE MAORI	:	The Native people of New Zealand. From Polynesian descent having a sophisticated Stone Age culture. The Maori had extraordinary navigational ability and were able to cross the Pacific.
GRIMACE	:	A snarl.
VISAGE	:	Here, face. Facial expressions that show thoughts and feelings.
THE MOKO	:	The esteemed, facial tattoo of the Maori people.
THE NGAPUHI	:	A Northern tribe who first had the most contact with the Europeans.
LINEAGE	:	Line of decent. Here, direct descendant from a royal ancestor.
NEW ZEALAND	:	A country near Australia in the South Pacific. It recently won the America's Cup.
TAPU	:	Taboo. Sacred.
TONNE	:	A metric unit, 2,205 pounds.

ACTIVITIES

• **Looking at culture**

Divide the class into two groups. One group should write down all the SIMILARITIES the Maoris have with our own culture and the other group should write down all the DIFFERENCES. The first obvious finding will be that there are far many more cultural similarities than differences. In essence, we are all doing similar things but in a different way. Common items suggested may be:

Differences

They have a chief.
They use tattoos to show beauty.
They use tattoos to show status.
They have a Marae or meeting house.
Their spiritual and physical worlds are linked through Nature and Art.
Cannibalism.

Similarities

We have a Commander in Chief.
We use face paint (makeup), cosmetic surgery, and hairpieces.
We use insignia, uniforms, and medals.
We have a town hall or government building.
Our spiritual world is represented by Art (Icons, paintings, chalice).
Ceremonial

This is a wonderful exercise because it enables students to make their own pre-judgments and realize their mistakes.

Discuss: How early European explorers may have easily and incorrectly judged native peoples of other lands.

- **Making a sculpture show expression.**

Divide the class into groups of five. Each group selects a subject who can project an expression. Each group masses out a head and neck approximation of a subject in a relaxed pose by following the instructions in Sculpture Activities, **creation of a portrait sculpture**. Attention to detail is not yet important. Have each model express ANGER. (Interesting how difficult it is to show anger for a long period of time.) Tell the students to notice:

1. The frown lines on the forehead and around the mouth
2. The mouth may be open or in a grimace.
3. The lip may be curled.
4. The eyes may be narrowed.

Have the students recreate these features in the sculpture. Next have the model show JOY. (Another model can be chosen should the first model need a rest!) Again tell the students to notice the characteristic features of joy.

1. There may be frown lines on the forehead and around the mouth.
2. The mouth may be open.
3. The eyes may be narrowed.
4. These expressions are very similar!

Next, the students recreate these features in a new sculpture. Place the sculptures in the front of the class in no particular order. Then the students describe why the successful sculptures are convincing.

Discuss: What features change Anger to Joy?

Label the sculptures randomly from 1 through 10. Have the next class attempt to tell which is which and why.

⇒ Throughout history most human communication has been non-verbal: The expression of a face, the gesture of hands, even the posture. The point of this exercise is again PERCEPTION. We are so used to reading peoples faces that it is difficult to detach and truly analyze what we are really seeing.

- **Research the use of the line**

As a lighthearted exercise have student investigate Saturday morning television cartoons.

⇒ Throughout this art form's short history it's characters have all been made solely with lines. In recent years, artists have included shading and color changes to create a three dimensional effect

Make copies of the program cover and have the students trace the cheek design and have them notice:

1. The design is not symmetrical.
2. The design has a conceptual sweep and flow.

Discuss: If the students were to invent their own culture (also with only Stone Age tools) how would they represent the many and sophisticated aspects of being human?

⇒ Remarkably, the students' suggestions may not be all that different to the Maori's. For example how else would you acknowledge a chief other than by decoration, and more powerfully, facial decoration?!

STUDY GUIDE

New Dimensions uses the remarkable designs of the Maori not only to illustrate the one-dimensional form; "the line," but also to introduce the place of Culture and non physical aspects of the Arts.

• **HISTORY**

The program begins in the magical setting of the Huraki Gulf. It is the setting of the Historical, Cultural and Artistic drama repeated throughout human history. INVARIABLY CULTURAL AND ARTISTIC IDEAS ASSIMILATE MUCH EASIER THAN COUNTRIES.

The first European settlers came to the Bay of Islands and traded with the local tribe called the NGAPUHI. This situation is very like disobeying the prime directive in "Star Trek." No matter how well intentioned, trading the Ngapuhi the gun created a dangerous imbalance of military power. WITH ONE SIDE HAVING A SUPERIORITY OF WEAPONRY THE BALANCE OF INTERTRIBAL DISPUTES WAS REPLACED BY GENOCIDE.

All sides in the conflict became desperate to trade with Europeans:

- ⇒ One tonne of flax bought one gun.
- ⇒ One tattooed, preserved head bought one gun, because THE MAORI HAD DEVELOPED AN UNPARALLELED ART FORM, STILL SHROUDED IN MYSTERY AND NO LONGER PRACTICED ANYWHERE IN THE WORLD.

• **THE FIRST DIMENSION**

What is this Art form and what is **the First Dimension?**

Answer: THE FIRST DIMENSION IS A LINE. The Maoris had developed line in Tattoo.

• **A CLASH OF ART AND CULTURE**

This race for survival changed even the structure of Maori Art and Economy. Instead of tending their crops, men, women, and children were out gathering flax or, worse, the society was involved in tattooing slaves for the sale of their heads.

- ⇒ Interestingly, when the NGAPUHI Chief Hongi Hika visited England, during the Napoleonic War period, his frighteningly tattooed face so amused the aristocracy that he was showered with one and a half ship loads of gifts. On the return trip he promptly traded these for guns when he reached Sydney, Australia. The sacred MOKO became commercialized for trade. Metal tools replaced stone tools and this in turn began to alter the style of the design.

Ultimately, during the 1860's, the Europeans went to war with the Maoris. The irony was that gun sales and intertribal warfare had left the Maoris armed and seasoned fighters. With guerrilla warfare and trench warfare the Maori tribes fought the British army to a standstill, before being defeated.

• **KING TAWHAEAO, MATUTERA POTATAU TE WHERO WHERO or creating the sculpture of a king with full 19th century MOKO!**

The Steps include:

- ⇒ Carve the tattoos in wax.
- ⇒ Build wax channels, called SPRUES, and a pouring cup.
- ⇒ Attach the sprues and cup to the wax sculpture.
- ⇒ Dip the wax in a ceramic mixture to build a shell.
- ⇒ Fire the shell at 700° Centigrade to melt the wax.
- ⇒ Pour the melted bronze at a temperature of 1,200° Centigrade.
- ⇒ Let the piece cool and remove the shell.
- ⇒ Remove small pieces of shell and imperfections in the casting.
- ⇒ Shine the work with a wire brush.
- ⇒ Apply the PATINA to add the coloring.
 - First heat the sculpture until it is too hot to touch and then spray or wipe on chemicals that will react with the copper in the bronze. SULFIDES create a dark brown color and NITRATES create a green color. (If an artist did nothing to color the bronze the bronze would slowly change color itself because the copper would react with chemicals in the air. This result, however would be mostly ugly blotches and patches, and would not be very aesthetic.)
- ⇒ Re-heat the sculpture and cover with wax. The wax melts and seals the work from the air and moisture.
- ⇒ Let the sculpture cool and then buff to shine. The work may even be appreciated by generations yet to come!

- **THE TATTOOING TECHNIQUE**

Notice the co-host is wearing gloves in respect for the Maori traditions. The tattooing instruments have shed the blood of chiefs and are therefore Tapu or sacred to the Maori people.

In early New Zealand the tattooing process really represented facial carving. The knife cut so deeply that in some cases the subject could blow smoke through his cheeks. Although these instances are examples of mistakes, tattooing was always excruciatingly painful.

Instruments:

The UHI : A 19th Century serrated chisel or knife
The MALLET : A light sculpted tool used to gently tap the chisel.
The PIGMENT POT : A container for a carbon and charcoal suspension.

Procedure:

- ⇒ The pattern was drawn onto the subject's face. (The design has artistic and Spiritual significance but was also matched with each individual face.)
- ⇒ The Uhi and Mallet were taken and the deep incisions were made. (Interestingly to this very day preserved heads show cuts as deep as 1 to 2 millimeters into the skin.)
- ⇒ The pigment, a black charcoal based mixture, was applied with the Uhi. (From beneath the skin this black pigment gives the blue black color of the Moko.)

- **THE ART AND CULTURE GAP**

When the students consider these topics it can be helpful to realize that "what may seem normal and reasonable to us, may be ridiculous to another culture!"

- ⇒ How would we explain our suit and tie to a man from 17th Century Europe?
- ⇒ The destruction of every historical civilization by our own hand to a Martian?
- ⇒ Our obsession with money to a Nomad?
- ⇒ Our need for privacy and solitude to an extended family community?
- ⇒ Our obsession with dieting to mal-nourished populations?

Their Artistic and Cultural ideas are DIFFERENT to ours.

The tattooed heads were preserved for two very different reasons:

1. **To cherish**

Friends, ancestors, and relatives were kept out of love and respect. They were steamed, sun-dried and smoked. Their features were reconstructed with flax and given a warm, relaxed look.

2. **To harbor revenge**

An inner dynamic of Maori society was that of MANA, (status, pride) and UTU (revenge). These created and maintained hierarchy and balance within the tribe and between tribes. Unfortunately these forces also created a cycle of destruction when the balance of society was upset, as in the 19th Century.

3. **As evidence of justice**

To end disputes or wars the preserved heads were a tangible evidence of settlement and justice in a society that had no written language. The enemies' heads, were preserved with a grimace. The lips were sewn back to expose the teeth.

- **TO READ A PERSON'S FACE!**

Is it not remarkable how many times a day we try to read each others minds and faces!?

In the Maori society, from the MOKO, you could read the LINEAGE, RANK, SPIRITUALITY, STATUS, CALIBER, OCCUPATION, TRIBE, and FAMILY. (Reference Dr. David Simmons TA MOKO MCMLXXXVI.)

As a comparison, have the students consider Western Society:

⇒ One of the first social questions asked in Western Society is “What do you do?” which is short for “What do you do for a living?” Not by “Are you a parent?” or “What do you believe in?” or “What do you feel?” In Western Society we are identified, to a large extent, by our OCCUPATION.

In reality there are countless ways we could be assessed and our expressions and non-verbal communication are ancient methods. The MOKO was an extension of the human features themselves. Art is COMMUNICATION and the face is the CENTER of communication. THE MAORI HAD COMBINED ART AND THE FACE TO CREATE THE MOST POWERFUL FORM OF NON-VERBAL ARTISTIC AND CULTURAL COMMUNICATION.

This ART links the Physical world to the Spiritual world and so was most sacred to the Maori. No food could be touched just following the procedure. It was the vehicle of transformation to a higher plane. It was “the blue privilege” and it touched the hearts and minds of the people far beyond it's **one-dimensional** physical form.

- ***SUMMARY OF NEW DIMENSIONS, THE SERIES***

The series teaches more than just the techniques of the Artist. It teaches a way of looking and a way of perceiving

We are all so sure we see clearly the world around us but we see only what we want to see.

Art is not a “smart persons” thing or just for creative people. Art is created by EVERYBODY, every day. The Chinese even title people “Living Works of Art” and there can be art in all forms of communication: ideas and passions. Just think about what an exciting topic this really is! Not only is there a world of ideas to explore but the passion, inspiration, heartbreak and even personality still lives on from other eras.

IMPORTANT THOUGHT TO LEAVE WITH THE STUDENTS

Most people are their own worst enemies because they place the most restrictions on themselves. (“I can’t even draw a straight line.”)

THERE ARE NO LIMITS TO CREATIVITY, OR TO UNDERSTANDING.