

Where Did These Cartoon Colors in Popular High School Culture Come From? An Investigation of Historical Palettes

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Introduction

In 2009 I look around and see that the range of colors used in fashion has exploded! My students dressed up in 1980s fashion for Homecoming. I was having flashbacks, but no wait a minute: we did not have colors like those! Ours were not as vibrant or bright. Where did all this color come from? Do teenagers today realize how different their color choices are? I do not think so. They just take it for granted like we did back in the 70s and 80s. In a generation technology has exploded and my students come to school dressed like comic book characters in their bright vivid colors.

Color is an integral part of the Visuals Arts curriculum. High School students usually have exposure from previous grades to color mixing and the color wheel. At this age they are ready for a deeper understanding of where color comes from and how to use and manipulate it. Painting is a difficult medium. It is often frustrating for the adolescent because they have an idea of what they want their end result to be and do not understand how to make it happen.

I teach at a school that is an International Baccalaureate (IB) Diploma and Middle Years Program (MYP) Magnet School where students are chosen from a lottery. The IB/MYP students are 10-15% of the total school population. This Unit will be for my combined IBMYP Art I & II courses. Level I includes 9th and 10th grade students and level II is only 10th graders. The Level II class has historically been too small to run on its own so it is combined with Level I. All MYP students are required to take an Arts class in Visual Art, Theater, or Music to satisfy a credit. Level II students often choose to continue with art in their 11th and 12th grade years.

In MYP, student's study of art, artists, and cultures is a major source for gaining knowledge and understanding of past and present art forms. The educational aim of the MYP is to awaken the intelligence of students and teach them to recognize relationships in art and the world outside school by combining knowledge, experience and critical observation.¹ I intend to use activities related to color such as color mixing, research of historical palettes and the use of color in order to stimulate my students to be aware of the use of contemporary color and pigments.

Objectives

Students will learn a basic understanding of the development of color in pigments and dyes. Their world is filled with the largest number of different colors of all time. I would like for them to realize the uniqueness of their experience with color with an almost unlimited number of pigments and dyes available to color everything from clothes to cars at this time.

To appreciate the colors that surround them, students should understand how we see color physically and perceive color in different ways as human beings. I intend to introduce material to help them learn how the eye works and what genetic conditions can occur that limit color vision.

In this unit students will learn how to mix various hues with paint of just a few colors, how to use color relationships, and how to construct a color wheel. Students will also learn to mix tints, tones, and shades. This should help ease the frustration of mixing paint for a painting they will create.

They will learn about the availability of pigments at different times in history, as well as the prominence and purpose in history of some pigments and the development of certain binders used at different times. I will also include a short discussion of how the color wheel was developed and theories behind it as it relates to the palettes they will study.

A painting will be created by the student as the result of studying a palette from Ancient Egyptian, Renaissance, and the Impressionist time periods. Students will use the colors available during that time period and study the reasons and purposes behind the limitation of color. Thus they will explore the relationship between the availability of artist's materials and artistic style.

Many of my students have said they believe that art is “free expression” and therefore can be anything you want it to be. This I believe is due in part to how Art instruction is delivered in elementary and middle school. These classes tend to be short so there is not enough time to go in depth. In High School art becomes a course, not just brief exposure to materials and quick projects. In this Unit I intend to begin to change the perception that Art is just free expression. Students should acquire a deeper understanding that a painting is not just a pretty picture, but a well executed work about which an artist makes intentional decisions using the available materials they have.

Background

Hazel Rossotti's *Colour: Why the World Isn't Grey* provides many good scientific facts about light and color. Ruth Beeston's Seminar at Davidson College "Live and in Color: A Scientific and Human Approach to Color" is another source for the information to follow.

How We See and Perceive Color

Without light you cannot see color. Light waves have different wavelengths, and the visible light we actually see is only a portion of the rays emitted from the sun or other sources of energy such as light bulbs, and candles (which emit visible light and some infrared light, but not the whole range of wavelengths). When visible white light is separated by using prisms or bubbles we begin to see the different colors corresponding to different wavelengths. Refraction (light bent at different angles) and diffraction (waves travel in different paths after hitting a surface) are ways we can see the separation of these light waves.

Reflection and absorption of these lights waves causes us to see color. The light waves that are reflected off an opaque surface or pass through a transparent object are the ones that enter our eyes. If all visible light waves reflect off an opaque surface or pass through a transparent object we see white. When all wavelengths of visible light are absorbed by a surface we see black. When only certain wavelengths of visible light are reflected by or pass through an object, while others are absorbed, then we see color.

The light waves enter the eye through the cornea then is adjusted in intensity by the iris and focused by the lens. The image is projected upside down on the retina.² The way cameras and camera obscura work is the same type of process, but in these the image is projected onto film or a screen.

The retina is a complex organ. For our purposes the important parts are the cells called rods and cones. They produce signals to other cells, which transmit information to the brain. The rods are very sensitive to light and control the brightness. There are 120 million of these in the eye. They help us to sense small levels of light at night and in our peripheral vision. There are no rods in our blind spot, which is where the optic nerve attaches to the retina. Cone cells are the ones responsible for color vision in daylight. There are 6-7 million of these. If there is no light or a low level of light we do not see color. There are 3 types of cones distinguished by the types of wavelengths they are sensitive to. Low sensitivity cones receive the short wavelengths of violet and blue. Medium cones sense green and yellow, and high sensitivity ones are tuned to long wavelengths of yellow, orange, and red.³

Color blindness happens when a genetic defect causes one of the types of cones to be missing. The absence of the medium-wave detectors results in red-green color blindness. There is a very rare genetic condition called Achromatopsia where there are no cone

cells. People with this condition have no color perception at all, but see everything in shades of gray.

When the rods and cones are stimulated they send signals back to the brain, which contribute to the sensation of vision. The electrical signals from the various light sensitive cells are sent to the brain through the optic nerve. The brain sorts out the various signals to produce a color image. There are no rods or cones at the point of entry of the optical nerve, because of this we have a blind spot in our vision.

The phenomenon of seeing after images is from the over stimulation of one kind of cone cell by staring at a color, causing us to see the complementary color in our vision when we look away.

The scientific investigations and discoveries during the late 19th century about our perception of color greatly influenced the Impressionist artists and their approach to the use of color.

Pigments from Historical Palettes

François Delamare and Bernard Guineau's Colors: The Story of Dyes and Pigments provides a good synopsis of the evolution of dyes and pigments throughout history. For interesting backgrounds about individual colors I consulted Victoria Finley's Color: A Natural History of the Palette.

Pigments and Dyes are similar in the fact they both can come from organic sources. A difference is pigments can be inorganic as well. Pigments are insoluble powders that must be combined with a binding medium to make paint. Dyes are soluble in water or other solvents and may be applied directly to fibers or other medium to be colored.

The sources of pigments are natural, synthetic, and lakes (insoluble white powder dyed with color). Natural pigments come from ground minerals, native earths, charcoal, bones and plant sources. Roasting or grinding can change the color.

Other interesting natural pigments are Indian Yellow, sepia, and mummy. Indian yellow was supposedly made from cow's urine when they are fed a diet of mango leaves. This method has not been proven. Feeding cows mango leaves would greatly distress their bodies. Sepia comes from the cuttle fish secreted when they are scared. The color mummy is a brown derived from ground up Ancient Egyptians or dead bodies.⁴

The Prehistoric palette came from natural materials, mainly colored earths (red earth, yellow earth, clay, and chalk) and charcoal. During the Ancient Egyptian period dark and light blues, greens and violet, white and gold colors were added. (See Appendix

“Available Color Pigments”) There are two categories of colors used in Ancient Egyptian painting. One is for naturalistic purposes such as landscapes and genre scenes (colors used for these were used at the discretion of the artist) and for religious, funerary and medical, purposes. The palette for this purpose was limited to six colors.⁵ Color mixing was not practiced generally due to the chemical reaction of some colors.⁶ Paintings retained their vibrancy over the millennia because they were generated largely from mineral compounds.⁷

The basic color palette of the Ancient Egyptian was black, white, red, green, blue, and yellow. (See Appendix, Available Color Pigments, for original sources of the pigments)

From the websites EgyptianMyths.net and About.com's “Colors of Ancient Egypt“ the following interpretations of the symbolic use of color follow.

-Black symbolized death, of the night, fertility, new life, and resurrection. It was the color of the underworld. It was the standard color for hair and the skin color of the people from the south: Nubians and Kushites.

-White was the color of purity, simple and sacred things, and cleanliness.

-Red was primarily used as the color of chaos and disorder, of destructive fire and fury, used to represent something dangerous. It was the color symbolizing life, victory, and protection. It was used for the normal skin tone of men and the color of the desert.

-Green depicted vegetation, new life, resurrection, and well being.

-Blue made from semiprecious stones represented the sky (heaven) and water. Hair of the gods was made from lapis lazuli. Turquoise represented joy, promise and foretelling, and the colors of the sun's rays at dawn.

-Yellow was the color of a woman's skin and the skin of people from the Mediterranean region (Libyans, Bedouin, Syrians and Hittites). It was used to depict the sun and gold, which could represent perfection, imperishable, eternalness, and indestructibility.

During the Middle Ages new pigments were derived from animal, vegetable, and mineral sources. New oil- and tempera-based binders were developed.⁸ Artists primarily “used mineral pigments, either imported or, more often, made locally. Principle colors were blue made of lapis lazuli or azurite, copper and earth greens, ocher and orpiment yellows, minium and vermilion reds, red and black ochers, and lead white. In addition, they also used the same coloring agents used in dyes as paints, in the form of colored lakes.”⁹

“Later, in the 12th-century, another beautiful colour – also bright and powerful – arrived in Venice. This fabulous pigment, called Ultramarine ('from overseas'), was – like the known Lazuline Blue – obtained from the precious stone Lapis Lazuli although it was immensely richer, deep and more powerful...this hugely expensive pigment had been developed by Persians in Afghanistan, and would play a huge role in the Renaissance colour palette.”¹⁰

Victoria Finley speaks of the figure in the bottom right of Michelangelo's unfinished painting, *The Entombment*, 1501. “It was probably intended to be the Virgin Mary. But the only blue paint that was deemed worthy for her holy robe in Renaissance Italy was ultramarine, the most expensive of colors except for gold. That corner was probably blank because the paint had not arrived from the patron – and the twenty-five-year-old artist could never have afforded to pay for it himself... in the spring of 1501 Michelangelo left both Rome and that canvas to carve David in Florence, and he never returned with his blue paint to finish the Virgin's robe.”¹¹

Renaissance artists experienced great changes with the development of oil painting and supports for paintings being developed. A greater variety of situations and subject matter gradually broadened.¹² Painting techniques such as linear perspective, foreshortening, sfumato, tenebrism, and chiaroscuro improved dramatically as did the theory and practice of colorism. A greater understanding of the illusion of depth in the picture-plane stimulated a desire for greater realism. Only two new pigments emerged during this time period, a synthetic version of Naples Yellow and some varieties of Red Lakes.¹³ Many plant based colors were still available but were not used because of their known imperfections.¹⁴

“The Industrial Revolution led to many changes...The good news was that development of new and more permanent colors came, first as a trickle then as a flood as chemists became more involved in the search, Prussian Blue was the first of these industrially produced revolutionary new colors. The bad news was that as the Renaissance studio system broke down, artists' understanding of the permanency and other issues surrounding color suffered.”¹⁵

“Innovations in color manufacture coincided with new optical theories about how we perceive colors of light, to inform and inspire the Impressionists and Post-impressionists, at a time when more colors were available to the painter than in the history of the world.”¹⁶ “Of greatest significance was the concept of contrast in complementary colors, developed in the early nineteenth century by the chemist Michel-Eugene Chevreul.”¹⁷

The information above is referencing some basic background that I want my students to be exposed to and not necessarily retain. The web sites and books are great sources for other information I may want to expand on in the future.

Classroom Strategies

Warm Up Assignments

This unit will begin with a warm up and a simple homework assignment. Homework for students is to bring in objects or color swatches from home representing the color wheel. This sample of colors begins the dialog into color and color theory. Their written Warm Up will include defining vocabulary words and answering questions about color such as:

- How do we see color?
- What is the difference between light, pigment, and dye?
- What do we use color pigment for? color light?
- What colors are used in fast food restaurants, for athletic teams, and cereal boxes?
- Why do you think designers, sports marketers, and advertisers use these colors?
- Where did the color in your clothes come from?

Presentation: Information on how do we see color

1. Without light you cannot see color.
2. Light waves have different wavelengths
3. Visible light we actually see is only a small part of the electromagnetic spectrum
4. Visible light can be separated by prisms, bubbles, or diffraction grating
5. Refraction (light bent at different angles)
6. Diffraction (waves travel in different paths after hitting a surface with closely spaced grooves)
7. Reflection and absorption of these lights waves causes use to see color.
8. Light waves enter the eye through the cornea then is adjusted in intensity by the iris and focused by the lens.

Outside Experiment: soap bubbles and camera obscura

The students mix the soap and glycerin in the water. They will use various found objects and their hands to blow bubbles while the following quote from Newton is read:

“Hitherto I have produced Whiteness by mixing the Colours of the Prisms. If now the Colours of natural Bodies are to be mingled, let Water a little ticken'd with Soap be agitated to raise a Froth, and after that Froth has stood a little, there will appear to one that shall view it intently various Colours every where in the Surfaces of the several Bubbles; but to one that shall go so far off, that he cannot distinguish the Colours from one another, the whole Froth will grow white with a perfect Whiteness.”¹⁸

Demonstrate with a camera obscura that light entering a small hole is projected upside down on the opposite surface. Put a pinhole in the bottom of an oatmeal container. Cover the open end with wax paper.

Presentation: continues

1. retina, rods, and cones
2. colorblindness
3. color perception
4. Sir Isaac Newton and the color wheel
 - a) prisms, refraction, and diffraction
 - b) demonstrate how to draw the color wheel reviewing vocabulary
5. Demonstrate painting the color wheel using primary colors, black, and white

Independent and Guided Practice

Students will complete two color wheel handouts (one using tempera and one using acrylic paint) with hues, tints, and shades. The color wheels are circular with shades on the inside, then hues, and tints on the outer ring. Students learn to mix the standard 12-color wheel using the primary colors, black, and white. Included on the handout is a monochromatic strip and mixing three sets of complementary colors. They will familiarize themselves with the differences and similarities in the mediums. Tempera will be used for the Ancient Egyptian work. Acrylic paint will be used for the other two paintings: Renaissance and Impressionist.

Students are assigned the research and painting projects in chronological order. Handouts with suggested activities are in the Appendix. Preliminary sketches will be approved and discussed prior to beginning painting. Before painting the Renaissance project students will complete two worksheets designed like a Munsell's color pages (example in the Appendix). One page will be a primary color and the other a secondary color.

Periodic and ending critiques are completed prior to final assessment. Students are graded on completeness of the projects assigned. Preliminary work is graded as assignments at 30% and projects are worth 50% of the quarter grade. All students will be graded according to the Art Performance Rubric created by Charlotte-Mecklenburg Schools Visual Arts Alignment Guide. (See Appendix)

Extension Activities

A cumulative project students can do is one where they choose colors for a palette from the 21st century and create a painting of their own. They may want to depict their friends as cartoon characters. The florescent acrylic paints from Blick Art Supplies are good ones to use to extend beyond the Impressionist palette.

Resources

Vocabulary List for Students

Hue	Pigment	Iris
Saturation	Dye	Pupil
Brightness	Binder	Spectrum
Tint	Organic	Lake (as in paint)
Shade	Hierarchical	sfumato
Tone	Rods	tenebrism
Refraction	Cones	chiaroscuro
Diffraction	Retina	

Materials

containers for water

dish soap

spoons

found objects for bubble making

oatmeal containers with pinhole in bottom and covered with wax paper on the open end

Student Sources

Hobbs, Jack A., Richard A. Salome, and Ken Vieth. 2005. *The visual experience*. Worcester, Mass: Davis Publication.

www.artlex.com

www.egyptianmyths.net/colors.htm

<http://africanhistory.about.com/od/egyptology/ss/EgyptColour.htm>

<http://www.webexhibits.org/pigments/>

<http://www.pyramidofman.com/Proportions.htm>

<http://www.legon.demon.co.uk/grid.htm>

<http://www.visual-arts-cork.com/artist-paints/renaissance-colour-palette.htm>.

Teacher Sources

<http://www.dickblick.com/> Good source for tempera and acrylic paint.

<http://artlex.com/> search for: Color, Seeing or sight

<http://www.martinfrost.ws/htmlfiles/glaucoma.html> Illustration of the eye

http://www.tooter4kids.com/Bubbles/Activities_Recipes.htm Bubbles recipes

Blindspot <http://www.yorku.ca/eye/blndspo1.htm>
Colorblind tests <http://colorvisiontesting.com/online%20test.htm>
<http://colorvisiontesting.com/ishihara.htm>

Background Resources

“Island of the Colorblind” by Oliver Sachs, 6 parts, YouTube.com
http://painting.about.com/od/oldmastertechniques/a/Techs_Monet.htm
<http://www.utrechtart.com/community/index.cfm?commentID=61>
http://painting.about.com/cs/colourtheory/a/palette_VanGogh.htm
http://www.paintmaking.com/historic_pigments.htm

Sources consulted for palettes

Encyclopedia of Irish and World Art. “*Renaissance Colour Palette.*” <http://www.visual-arts-cork.com/artist-paints/renaissance-colour-palette.htm>. (Visual-arts-cork.com, 2008-2009)
<http://www.egyptianmyths.net/colors.htm>
<http://africanhistory.about.com/od/egyptology/ss/EgyptColour.htm>
http://www.paintmaking.com/historic_pigments.htm
<http://www.visual-arts-cork.com/artist-paints/renaissance-colour-palette.htm>
<http://www.paintmaking.com/history.htm>
<http://www.utrechtart.com/community/index.cfm?commentID=61>
<http://www.fineartstore.com/Catalog/tabid/365/CategoryID/17093/List/1/Level/a/Default.aspx?SortField=UnitCost,UnitCost>

Appendix

Handouts

Paint Like an Egyptian! (Ancient one) 5000-332 BCE

The basic color palette of the Ancient Egyptian was black, white, red, green, blue, and yellow.

Research Questions to be completed in sketchbooks:.

Include all sources you used to find the answers to these questions.

What are the two different categories Egyptians divided their colors into and why?

What is the symbolic meaning of the colors green, red, white, black, yellow, and Egyptian blue?

Who did each color symbolize?

What were the pigments used and where did they come from?
What canon of proportion did they use? Draw an example.
What is hierarchical scale? How did they use it in their pictures?
List some contemporary life situations that employ some type of ranking of individuals.

Assignment: Using the information gathered create 3-5 ideas compositions in your sketchbook. You must include a hierarchical scale of a group of people and a color plan. List colors choices and reasons for choosing them.

Suggested websites for research:

www.egyptianmyths.net/colors.htm
<http://africanhistory.about.com/od/egyptology/ss/EgyptColour.htm>
<http://www.webexhibits.org/pigments/>
<http://www.pyramidofman.com/Proportions.htm>
<http://www.legon.demon.co.uk/grid.htm>

Renaissance Palette

Quattrocento and Cinquecento! (15th and 16th Century)

Research Questions to be completed in sketchbooks:

Include all sources you used to find the answers to these questions.

Provide some important information about the colors yellow, red, blue, green, and purple?

What were some important discoveries related to drawing and painting techniques?

What were the subjects of paintings during this time period?

Who (or what kind of people) were the major patrons during this time period?

Assignment: Using the information gathered create 3-5 ideas compositions in your sketchbook. You must include a heroic figure, portrait, or group of people and a color plan. List colors choices and reasons for choosing them.

Suggested websites for research:

<http://www.webexhibits.org/pigments/>
<http://www.visual-arts-cork.com/artist-paints/renaissance-colour-palette.htm>.

19th Century and the Impressionists

“When you go out to paint, try to forget what objects you have before you, a tree, a house, a field or whatever. Merely think here is a little square of blue, here an oblong of pink, here a streak of yellow, and paint it just as it looks to you, the exact color and shape, until it gives your own naive impression of the scene before you.” Claude Monet¹⁹

Research Questions to be completed in sketchbooks:

Include all sources you used to find the answers to these questions.

What were some pigment discoveries during this time period?

What were some important discoveries related to optics and color theory?

What were the subjects of paintings during this time period?

Why was the work of the Impressionists considered inferior to the Academy?

Assignment: Using the information gathered create 3-5 ideas compositions in your sketchbook. You must include a scene from everyday life (genre). Rank colors according to their color temperature. List all complementary colors, split-complementary and double spit-complementary colors.

Suggested websites for research:

<http://www.webexhibits.org/pigments/>

Artist Research

Answer the following questions about your assigned artist in your Developmental Workbook. Be sure to *cite your references*. Answer using complete words and sentences when necessary.

Name of Chosen Artist _____

Provide the dates and places of artist's birth and death.

Where did they live and work?

How/where did she/he train? Did she/he receive formal arts instruction?

How did they support themselves? (This may be difficult to find.)

Discuss some of the people and/or events that influenced there art.

Describe the artist's style.

Describe any recurring subjects, symbols, images, and/or themes in the artist's work.

Cite (Title, medium, and Date) and describe two examples of the artist's work that you would consider representative of her/his style. Include images either printed or drawn.

Describe any additional mentionable qualities of your chosen artist.

Adapted from:

http://artsedge.kennedycenter.org/content/2253/2253_fiveartists_research.pdf

**Available Color Pigments
{contemporary paint color substitution}**

<i>HUE</i>	<i>Prehistory</i>	<i>Ancient Egyptian</i>	<i>Renaissance</i>	<i>Impressionist and Post Impressionist</i>
Black	charcoal	charcoal	charcoal	charcoal
		Ivory	Ivory	Ivory
		Lamp	Lamp	Lamp
		Bone	Bone	
				Asphaltum
Red	Red Earth	red ochre	red ochre	
	iron oxide, hematite	iron oxide, hematite		
		Red Lead (Vermillion)	Red Lead (Saturn Red){ Vermillion }	
			Venetian Red	
				Mars Red
			Kermes Lake {Permanent Crimson}	
			Carmine {cochineal bug}	
			Cinnabar	
			Chinese Vermillion	
			Red Lake	
			Dragon's Blood	
				Alizarin Crimson
				Cadium Red Light
				Cadium Red Medium

<i>HUE</i>	<i>Prehistory</i>	<i>Ancient Egyptian</i>	<i>Renaissance</i>	<i>Impressionist and Post Impressionist</i>
Yellow	Yellow Earth	Yellow ochre	Yellow ochre	Yellow ochre
		Orpiment {Cadmium Yellow}	Orpiment {Cadmium Yellow}	Cadmium Yellow light
				Cadmium Yellow deep
		Lead Antimonite/ Naples Yellow	Naples Yellow Lead Antimonite/	
		Realgar (Bright Red or Orange Red) considered a yellow at this time.		
			Massicot (lead oxide)	
			Lead-Tin Yellow (Cadmium Yellow)	
			Gamboge	
				Chrome Yellow
				Aureolin
				Zinc Yellow
				Strontium Yellow
				Lemon Yellow (Barium Chromate)
				Indian Yellow
Brown	Raw Sienna		Raw Sienna	Raw Sienna
	Raw Umber		Raw Umber	Raw Umber

<i>HUE</i>	<i>Prehistory</i>	<i>Ancient Egyptian</i>	<i>Renaissance</i>	<i>Impressionist and Post Impressionist</i>
			Burnt Sienna	Burnt Sienna
			Burnt Umber	Burnt Umber
				Egyptian Brown (Mummy)
White	Clay			
	Chalk	chalk (Titanium or Gesso)	chalk (Titanium or Gesso)	chalk (Titanium or Gesso)
		Lead (Flake or add yellow to Titanium)	Lead (Flake or add yellow to Titanium)	Lead (Flake or add yellow to Titanium)
		Gypsum (Gesso)	Gypsum (Gesso)	Gypsum (Gesso)
				Zinc White (Chinese White)
				Titanium White
Blue		Indigo (dye/ink)		
		Turquoise		
		Egyptian light (cobalt turquoise)	Egyptian light (cobalt turquoise)	
		Egyptian dark (Ultramarine)	Egyptian dark (Ultramarine)	
		Azurite (Ultramarine)	Azurite (Ultramarine)	
		Lapis Lazuli (Ultramarine)		
			Ultramarine	
				Prussian Blue
				Cobalt blue

<i>HUE</i>	<i>Prehistory</i>	<i>Ancient Egyptian</i>	<i>Renaissance</i>	<i>Impressionist and Post Impressionist</i>
				French Ultramarine
				Cerulean Blue
Violet			Indigo	
			Madder	
			Ultramarine Ashes	
				Manve
Green			Green Earth aka Terre Verte (Verona Green Celadonite)	
		Malachite (Permanent Green or Phthalo Green)	Malachite (Permanent Green or Phthalo Green)	
		Verdigris (Emerald Green)	Verdigris (Emerald Green)	
		Chrysocolla (light Cobalt Green)		
				Viridian
				Chromium Green Oxide
				Cobalt Green
Orange	Orange ochre			
Red Violet	Violet oxide (?)			
Red Orange			Realgar (Bright Red or Orange Red) considered a yellow at this time.	

<i>HUE</i>	<i>Prehistory</i>	<i>Ancient Egyptian</i>	<i>Renaissance</i>	<i>Impressionist and Post Impressionist</i>
Gold		Gold	Gold	
Silver		Silver	Silver	

Charlotte-Mecklenburg Schools
Visual Art Performance Rubric Grade Designation Guide
(All grades are cumulative)

A The student is *highly* self-motivated, uses problem solving skills, and works independently as much as possible. The student is a risk taker and an original thinker. The student completes *all* assignments according to the guidelines given. The student uses teacher feedback to improve his work. The student completes *all* assignments by the deadline, often spending time outside of class. The student's artwork demonstrates a great understanding of the skills and techniques taught in the lesson. The student seems to be working to maximum ability.

B The student is motivated and enthusiastic. The student *usually* takes risks and makes an effort to be creative and original. The student completes *all* assignments according to the guidelines given. The student uses teacher feedback to improve his work. The student completes *all* assignments by the deadline, spending time outside of class when necessary. The student's artwork demonstrates an understanding of the skills and techniques taught in the lesson. The student's artwork is consistently above average.

C The student does satisfactory work, but it is felt that better work should be expected. The student is *sometimes* reluctant to take risks and occasionally draws upon others' ideas more than his own. Selected work habits (completing assignments on time, following directions, staying on tasks) *may* need some attention. The student uses *most* teacher feedback to improve his work. The student's artwork demonstrates a *basic* understanding of the skills and techniques taught in the lesson. The student's artwork is consistently at standard.

D The student is *rarely* motivated and seldom works without teacher redirection. The student is usually reluctant to take risks and tends to draw heavily upon others' ideas instead of his own. The student makes a *minimal* effort to follow the guidelines given for each project. The student *rarely* uses teacher feedback to improve his work. The student turns in many late or incomplete assignments. The student's artwork demonstrates *little* understanding of the skills and techniques taught in the lesson. The student's artwork is consistently below standard.

F The student is not motivated and will not work without constant teacher intervention. The student makes a *minimal* effort to follow the guidelines given for each project. The student refuses to use teacher feedback to improve his work. The student's assignments are *usually* late, missing or incomplete. The student's artwork demonstrates *little* or no understanding of the skills and techniques taught in the lesson. The student's artwork is consistently well below standard.

Bibliography

- Ball, Philip. 2003. *Bright earth: art and the invention of color*. Chicago: University of Chicago Press.
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¹The information for this course description was derived from IBO Middle Years Program Guide for the Arts 2002

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