## Notes on Painting

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## Contents

## Introduction

## Understanding color

The Color Wheel
Primary colors on the color wheel
Secondary colors on the color wheel
Tertiary colors on the color wheel
Complementary colors on the color wheel
True complements

## Your Personal color charts

An introduction to color schemes
Semi neutral colors
Neutralizing complements
Monochromatic color schemes
Analogous color schemes
Complementary color schemes
Split-complementary color schemes
Triadic color schemes
The primary triad
The secondary triad
The tertiary triad

## The full range of any color

## Understanding Color Value

The Value Scale

## Using color schemes

## Notes about selecting color schemes

## Your palette and the color wheel

## Color "Harmony

Three generally accepted views about color harmony in painting
Creative license
Harmony of light in nature
Harmony of complements and color families

What makes a "good" (and "bad") palette?

## Painting Surfaces

The weave of the canvas as a texture
Impasto brushwork as texture
Stippled textures
Adding texturing material to the paint

## The advantage of a colored ground

## The "Fat over lean" rule

## Preparing an impasto ground with reduced "fat"

## Focusing on the Subject

Understanding the subject
Attention to detail: a storyteller analogy
Calling attention to the subject
Contrast of value
Contrast of color and color intensity
Contrast of paint application
Contrast of focus, brushwork edges, and "lost and found" edges Suggestions for creating and using edges

## Using Contrast to Achieve Visual Balance

## Notes about composition

Balance
Perspective
Rhythm
Several compositional aids

## Notes about shadows

## Planning ahead

Visualization
Organizing the painting process

## Notes about drawing

## The block-in

Line only block-in
Line and mass block-in
Monochromatic (grisaille) value study block-in

## A few helpful techniques to consider

The art of looking away
The art of squinting
The mirror
Time and creativity
"Getting something started"

## Adding color

More notes about color
Getting the value of colors right
The toned ground as an aid
Getting the lightest and darkest values right
Creating an illusion of luminosity with color value
The color and value of white in nature
Notes about black and your darkest colors
The white card method of seeing value correctly
The monochromatic (grisaille) block-in as an aid
Getting color temperature right
Understanding Color Temperature with Complementary Colors
The "Warm" and "Cool" sides of the Color Wheel
Color Temperature of Adjacent Colors on the Color Wheel

## Pre-preparing your white

## Several paint application techniques <br> Solvent wash <br> "Wet in wet" <br> Dry brush <br> Painting with a palette knife <br> Scraping <br> Glazes

## Final varnish

## Making progress with what you know

Learn from your mistakes
Several examples of concepts noted here in review
"En plein air" versus studio painting
En plein air
Studio Painting
Planning your working space

## Notes on oil painting materials for students

## Glossary

## Introduction

Observing a demonstration of someone painting is, of course, a useful way to learn but some aspects of painting cannot be taught. We can observe someone mixing a particular color and applying it, for example, but it's only by actually practicing do we learn how to do it ourselves. Most art instruction is a combination of suggested concepts that can be considered, often as answered questions from the student such as "What colors should I use?", "How should I start?", "How do I make this color?", etc. The answer to these questions may have many different answers depending on the instructor and his/her experience. The actual act of painting, however, the mixing and application of paint is learned by doing, the second part of good instruction.

This outline will attempt to answer the questions above and a few more. It is simply a compilation of what l've learned, what l've been taught, and what simply makes sense to me after considering other points of view; a set of guidelines to be considered, based on my experience only. Remember that there are no strict "rules" to making art.

The first subject in this outline, "understanding color", is first because questions such as "What colors should I use?" and "How do I make the "right colors?" are among the first questions from those who are new to painting. Consider this section to be simply a set of guidelines to make more sense of color and how it potentially can be used. Understanding and using the "color wheel" and various color "schemes", for example, can help understand abstract concepts like 'warm" and "cool" color and can also simplify color choices.

My first palette of tube colors was selected for me by my first painting instructor- a set of warm and cool primary colors plus white and black for adjusting value (these terms will be discussed later in this outline). At that time, I had a rudimentary understanding of color that most children have. Mixing yellow with blue, for example, will yield green. But creating the precise version of green that was required was a challenge and I quickly found that only by experimenting and actually painting would I learn the full range of colors that my palette could produce.

The only exercise here, then, "Your Personal Color Charts", is designed to accomplish several things; first it provides a visual reference of the potential colors that can be made from your chosen colors, largely removing the random experimentation that I faced as an aspiring painter. It also allows one to experience the application of the paint itself. For oil and acrylic painters, for example, some paint out of the tube is "buttery", some are more like paste, and the color of some are more "powerful" than others. Each of these characteristics affects the paint mixture. Making the "charts" is probably the best investment of time a new painter can make. It's the first step in teaching two fundamental skills: creating paint mixtures that are the right color and "value" and the application of paint to the painting surface.

Although some sections of this outline are specific to oil and acrylic painting with regard to paint application, surface preparation and texture, most of the general concepts described here should be useful to all artists, regardless of medium. Some concepts, such as color "harmony" have several generally accepted "points of view" and those are presented as choices to be considered. Other concepts such as "composition" are described with several generally accepted artistic points of view combined with what simply makes sense to me from my own personal experience.

What makes sense to you is always the best path to follow.

## Understanding Color

The colors that you choose for your palette will determine the range and quality of the color mixtures that will be available to you as you paint. Color can simply make things beautiful, but it can also be used to call attention to areas of a painting that are important. "Purer" color and color "contrast", for example, will tend to draw the viewer's eye to areas of a painting that are important, such as the "focal point" or "center of interest". Furthermore, a knowledge of "complements" and working with simple "color schemes" will simplify your color choices and make abstract concepts such as "warm" and "cool" color easier to understand. The paragraphs that follow will describe these and many other concepts that may be useful for you to consider. Start by understanding the color wheel below.

## The Color Wheel

The color wheel is simply a circle of individual colors, arranged as shown below.


The color wheel

The color wheel is a visual aid that will not only help you locate and identify colors but will also help you understand the relationship between certain colors, like "analogous" and "complementary colors" (see sections on each, below). An understanding of the colors on the color wheel and the harmonizing relationships between them will also help you to use color in a more expressive and meaningful way. Working toward an intuitive understanding of the color wheel should be one of your goals.

If you are new to painting and need to select the colors that you will use, it may be helpful to start with tube colors that represent each of the twelve colors on the color wheel (plus white) to reinforce the color concepts that are described below. You could, for example, select colors that simply look good to you and visually fit the description of the color on the color wheel, like "orange", or you could use the suggested tube colors in the section "Your Palette and the Color Wheel".

The pigments suggested in the section "Your Palette and the Color Wheel" are extremely versatile because many commonly used tube colors not on the wheel can be made directly from mixing colors that are either adjacent to each other on the wheel, or with their complements (the colors opposite each other on the wheel). In addition, our suggested complementary colors have been selected because they are "true" complements, that is, you can expect them to yield color mixtures that are especially pleasing in appearance.

Whatever colors you choose, it may be best to use them as a "core" group for a reasonable length of time and experiment with other colors, if you choose, around this "core" group. In this way you will eventually develop a better understanding of the full mixing range, as well as the limitations, of your new colors.

## Primary colors on the color wheel

Colors that do not contain any other color are called primary colors. They are the colors "red", "blue" and "yellow" and are located equally spaced (a perfect triangle) on the color wheel.

## Secondary colors on the color wheel

Mix any two primaries equally and you will make three additional "secondary" colors.

These primary colors: will yield this secondary color:

| yellow and blue | green |
| :--- | :--- |
| blue and red | violet |
| red and yellow | orange |

The secondary colors are located on the color wheel exactly between the primary colors that make them.

## Tertiary colors on the color wheel:

Mix each primary color equally with a secondary color adjacent to it and you will make six additional colors called "tertiary" colors.

| This primary color: | mixed with this secondary color: | will yield a tertiary color called: |
| :--- | :--- | :--- |
| Yellow | green | yellow green |
| Yellow | orange | yellow orange |
| Blue | green | blue green |
| Blue | violet | blue violet |
| Red | orange | red orange |
| Red | violet | red violet |

The tertiary colors are also located on the color wheel exactly between the colors that made them.

## Note that the first color in each name is always the name of the primary color.

## Complementary colors on the color wheel

Colors that are directly opposite each other on the color wheel are called complementary colors.

Mixing two complements neutralizes each (makes their color less intense) without the "muddying" effect that mixing with non-complements may have.

Mixing any two complementary colors will create a color called a "semi neutral" that will visually display either of the two complementary colors that were used to make it.

Complementary color mixtures (semi neutrals) could be said to be purer and more pleasing in appearance than non-complementary mixtures.

As with the "positive" and "negative" polarity of magnetism, complementary colors could be thought of as opposite sides of the same color and are therefore considered to be harmonious when used together.

## Complementary colors on the color wheel are:

```
Yellow------------violet
Yellow green-----red-violet
green----------------Red
blue green--------red orange
Blue
        -orange
blue violet---------yellow-orange
```


## True complements

When speaking of paint pigments, true complements are two complementary colors that, when gradually mixed together, will eventually yield a neutral color that does not display either of the two, called a "gray". True complements, when mixed together, will yield the purest "semi neutral" colors. All the tube colors used on our recommended palette could be said to be true complements. You can expect them to yield beautiful semi neutral colors.

## Your personal color charts

Whatever colors you choose to add to your palette, the best way to quickly understand their color potential is to make a visual indication of the full mixing range of each color called "color charts".

Making your own personal color charts is a perfect introduction to color mixing, determining correct value, and paint application. Your color charts will also provide you with a color reference that can be used to find mixing combinations for colors that are particularly difficult to make as well as provide you with a complete understanding of the color potential of your palette. A complete set of charts for our palette of twelve colors, for example, will yield 780 distinct new colors. Without your color charts you could paint a lifetime and not realize the full potential of your palette.

If your palette consists of pigments that represent the twelve colors of the color wheel, you will make a total of thirteen charts. Your first chart will represent each pigment straight from the tube applied to each of the squares at top. Each is then progressively lightened with white, as described below.

The remaining charts will consist of a single color modified with each of the other pigments in each of the top squares and then progressively modified with white in the squares below.

To make your first chart, use masking tape to mask a row of 1 " squares onto a sheet of illustration board, canvas board, foam core, or any similar material for each color on your palette. If you use twelve colors, for example, you will have one row of twelve 1" squares at the top of your chart. Separate the squares by about $1 / 4^{\prime \prime}$ and make four more rows of 1 " squares directly below this row, also separated by about $1 / 4$ ". This will make a "chart" that is approximately 8 " by 19 " with five rows of twelve columns as shown in the chart below:


Chart 1: an example of a palette of 12 colors of the color wheel

## For chart 1

Select one color from your palette and fill the top left square with a generous amount of paint directly from the tube. Fill the four squares below it with the same color but progressively lightened with white in each square until you have five distinct values that range from the pure tube color at the top to a value that is almost white at the bottom.

If you're using colors from the color wheel, select the next color clockwise on the wheel and apply it to the next square. Progressively lighten it with white in the four squares below. Do the same with your remaining colors. This chart now represents the value range each of your colors when mixed only with white.

Label each top square with the name of the tube color it represents.

## For charts 2 thru 13:

Select one color (for example yellow) from your palette and fill the top left square with a generous amount of paint directly from the tube as above. Progressively lighten the color with white as in chart 1. Label the top of this chart with the name of that tube color.

If you're using colors from the color wheel, select the next color clockwise on the wheel (yellow green) and separately mix it on your palette with yellow. Your final mixture should almost yellow green but should still be predominately yellow. Apply this mixture to the next top square and lighten with white as with square 1.

Continue with the rest of the colors on the color chart, careful to ensure that the final mixtures of each are predominately yellow. Label each top row with the mixtures that were made (" $Y+Y G$ " for our yellow-yellow green mixture, for example)

To mix each color, use your palette knife to add the color that you are starting with to your palette. Start with a quantity that is about the size of a quarter. Add the color that you intend to mix into it (white) to a separate mixing area of the palette and use the palette knife to gradually blend the mixture.

Generally, mix color into the edge of the color that you are mixing into until the color of the mixture is correct.
Note how much color was required to make the mixture correct.
Always mix color gradually. Avoid mixing two large quantities of paint equally together at once and you will waste less paint.

A completed chart for yellow is shown below:


As you paint, carefully note, and try to remember the following:

1. Note the consistency of each color. Some tube colors are thin out of the tube and others are more like paste. Others are "creamy" or "buttery".
2. You will find that some paint, like Pthalo Blue or Alizarin Crimson, are more "powerful" than others and require less of them to make the color and value that you're looking for.

Others, like Ultramarine Violet are weaker and require more paint to do the same.
3. Note how much paint needs to be loaded onto the brush to make it look thick in the square and don't skimp on paint.
4. Finally, note and try to remember the new colors that you are creating. Think of yourself as a visual musician learning the notes of a new instrument. You may be surprised by some of the new colors that you create. Note in particular the colors created by mixing two complementary colors. Mixing yellow and violet, for example, will yield brown and tan colors, for example, while orange and blue will yield red brown colors.

If we were making an actual painting it would be preferable to clean our brush(s) and palette before mixing our next color. This is especially important for our charts because we do not want to contaminate any of our colors with colors from other mixtures.

Observe the characteristics and color of the paint as described above as you work.
Clean your brushes and palette and proceed clockwise around the color wheel, adding the next color to the next column until you have mixed each of the colors of your palette individually and tinted them with white as described above. When you have finished mixing all the colors on your palette individually with yellow, you will have finished your "yellow" chart with a total of sixty new colors made from it. Label it yellow along with the name of your yellow pigment and move on to your next chart, "yellow-green"

The key to properly mixing the top squares of each chart is to ensure that the final mixture still visibly displays the color that you started with. Understanding this procedure is essential to using certain color schemes such as the monochromatic schemes noted above.

## An introduction to color schemes

Hundreds of years ago, in the days of the old masters, artists had a limited selection of colors to choose from. Most of the materials used for their pigments came directly from the earth. The easiest colors to make happened to be "reddish", "brownish" or "yellowish" colors plus black and white. Some of their colors, like burnt sienna, yellow ochre, and burnt umber are made from clay. Lead White is made from lead and Lamp Black is made from the soot of burned wood. All are still used today.

Despite a very limited palette of simple earth colors (plus black and white), the old masters were able to create beautiful and striking paintings. In addition, the unintentional byproduct of their limited palette was something that we now recognize as color "harmony" (see section on color harmony below). Their colors "looked good" together because most were made from colors that were generally "warm" (reds, brown and yellows). Their colors were "harmonious" because they all had "warmness" in common.

In fact, if their colors consisted generally of mixtures of reds and yellows (oranges), with black and white, you could say that they were working with what we might now call either a "monochromatic" orange color scheme, or an "analogous warm" color scheme depending on how the colors were used.

Monochromatic color schemes may be the simplest use of color, but they can be a very harmonious and powerful use of it, as evidenced by the old masters. You don't necessarily need a lot of color to make great looking paintings.

Today, we are fortunate to have a large selection of colors to choose from, and our modern knowledge of color and how it relates to our pigments allows us to select and mix purer and more pleasing colors and combinations of colors for our paintings.

Our knowledge of color now allows us to pre-select colors that are known to look "good" together because, as with the old masters' simple color scheme above, they are related in one of several ways.

Color schemes use colors that are selected because they are related to each other by their position on the color wheel. Artists use color schemes to achieve colors that look "good" or "harmonious" together and are purer and therefore more pleasing to look at.

## Using the color wheel, four commonly used color schemes can be selected from:

A single color on the color wheel (a monochromatic scheme),
Colors that are adjacent to each other on the color wheel (an analogous color scheme),
Two or more complementary colors (a complementary color scheme), or,
Three colors that are equidistant on the color wheel (a triadic color scheme)
The simpler the color scheme is, the easier it is to paint. Simple monochromatic or complementary schemes, for example, tend to simplify color, value, and temperature decisions. For this reason, try practicing with simple color schemes first, and then move on to more complex color schemes when you become proficient.

Once again, you don't necessarily need a lot of color to make great looking paintings.

## Semi neutral colors

Each of the twelve colors on the color wheel has a color called a "complement" directly opposite from it. Colors called semi neutrals are made from mixing complementary colors together. Semi neutrals tend to be purer and more pleasing than colors made from non-complementary colors.

To be specific, semi neutrals are mixtures of any two complementary colors where either of the two original colors is still visible.

For example, if we start with orange and add its complement blue, (the color directly opposite it on the color wheel), the resulting mixture would be called a "semi neutral orange" if the mixture exhibits more orange than blue.

If the mixture became bluer than orange, it would be called "semi neutral blue".

This is important to understand because, as we will learn later, certain color schemes depend on their semi neutral mixtures to visually display one or the other of their two complementary colors, so they can be called specific color schemes.

## Neutralizing complements

If we start with orange and gradually mix its complement (blue) with it, the orange will gradually look less orange. This effect is called neutralizing the color. As we increase blue to our blue-orange mixture, the mixture will become progressively less orange. Another way to say this would be to say that our orange is "less intense" or we have "reduced its intensity".

The colors of our orange semi neutral mixtures, then, can range from almost pure orange to a color that is close to exhibiting more blue than orange.

Note: Perfectly matched pigments of complementary colors could be said to be "true" complements if, after gradually and increasingly mixing them together, a neutral "gray" is eventually formed that does not exhibit either of the two. Mixing them further than this "gray" color will make the mixture start to look like the color on the opposite side. Many of the colors that we have chosen for your palette could be said to be true complements and you can expect them to create pure and visually appealing semi neutrals.

Mixing white or black with any color to adjust its value (its relative lightness or darkness) will also neutralize the color.

Most colors in nature are already neutralized to some degree, and our need to adjust value (the lightness or darkness of colors) as we paint may neutralize them even further. Remember, however, that neutralized colors can be used to our advantage. As your painting nears completion, find the "center of interest" or other passages that are important to you and use purer (less neutralized) colors to accentuate and call attention to them. The contrast between the intensity of the neutralized colors and the purer colors of the important passages will lead the viewer's eyes directly to where you want them to go.

## Analogous color schemes

Analogous color schemes use any three adjacent colors on the color wheel (some artists extend this to four).
In an analogous orange scheme, our orange color could be used with the two colors adjacent to it for a total of three: red-orange, orange, and yellow orange.

There are two mixing possibilities for an analogous scheme. They are:

1. Each of the three colors could be used individually and modified with white or black if required.
2. Any two or all three (or four) colors could be mixed together and modified with white or black if required.

Often, one of the three analogous colors will be selected to be the "dominant", or most visible color, one is selected to be the "subordinate", or least visible, and the remaining color is used as an accent.

## Monochromatic color schemes

A monochromatic color scheme, contrary to what you might think, does not necessarily have to be made from a single color. Using the color wheel, it could be any color mixed with its complement (the color that is directly opposite it on the wheel) plus black or white. Complementary color mixtures will be monochromatic if the original color does not start to look like its complement. For example, with a monochromatic orange color scheme if you start with orange and increasingly add its complement (blue), the resulting semi neutral mixture will eventually start to exhibit more blue than orange and no longer be monochromatic orange. A monochromatic orange color scheme will be monochromatic if the resulting semi neutral mixtures remain on the orange side of the color wheel and do not visually exhibit any blue.
(Note: when you use individual complementary color mixtures that visually exhibit both sides of the complementary pair, the scheme becomes a "complementary" scheme that we will discuss later).

In addition, white and black can also be used to lighten or darken the values of our monochromatic mixtures if required.

Monochromatic schemes are ideal for students to start with because aspects of color like temperature and value are easier to control with them. Because each complementary pair contains a "warm" and a "cool" side (see "complementary color schemes", below), simply adding one or the other will correct any temperature problem. Similarly, value corrections can be easily made with either of the two complementary colors or with black or white.

There are fewer choices to make with monochromatic schemes, so you can focus on the subject right away. For this reason, they are also ideal for students who want to begin painting subjects on-site, "En plein air").

In terms of color "harmony" no other color schemes exhibit harmony more clearly than monochromatic schemes because all color mixes share the same dominant color.

The range of color and value that two complements plus black and white can create may surprise you.


Scaffolds, Monochromatic study
Although monochromatic paintings can stand by themselves as finished works, monochromatic preparatory studies, such as the study above, are often used to establish values and to better understand the subject before painting begins. They can also serve as the foundation layer of a painting, sometimes called a "grisaille" (Refer to the section on "Monochromatic (grisaille) value study block-in"). A single color of your choice can be applied as washes to achieve the values that are needed as shown here or, if using a color from the color wheel, can be modified with its complement and used as noted in the section above.

## Complementary color schemes

Complementary color schemes use a single color on the color wheel with its complement. As in our monochromatic scheme above, if you start with orange and increasingly add its complement (blue), the resulting mixture will eventually start to exhibit more blue than orange and no longer be monochromatic orange. By mixing our orange with its complement blue then, the resulting mixtures can either exhibit more orange than blue, or more blue than orange depending on how we mix them. When we make separate mixtures that clearly exhibit both orange and blue colors, and they are used together in our painting, the resulting color scheme is called a "complementary " color scheme.

Any one of the twelve colors on the color wheel mixed with its complement (the color directly opposite it on the color wheel) can be used to make a complementary color scheme. There are, then, six pairs of complements on the color wheel.

In addition, each complementary pair has a "warm" and a "cool" side. The six complementary pairs and their "warm" and "cool" sides are shown below. Note: The terms "warm" and "cool" have to do with a color's "temperature". Color temperature is that characteristic of color that gives it its relative "warm" or "cool" appearance (see the section on color temperature).
Cool: Warm:
violet -------------- Yellow
yellow-green------ red-violet
green-------------- Red
blue-green--------- red orange
Blue----------------orange
blue violet----------yellow-orange

Artists usually try to balance "warm" and "cool" colors within a painting and try to make one or the other "dominant", or more visible than the other.

Usually one of the two complements will "dominate" a complementary scheme. In other words, in the case of our blue/orange scheme, the final painting will either be primarily blue (less orange) or primarily orange (less blue). This isn't an inflexible rule, but your paintings will look more interesting and balanced if one color is "dominant", or more visible and the other is "subordinate", or less visible.

In our orange/blue complementary scheme, orange, as you might expect is the "warm" side of the pair (think of warm orange sunsets or hot orange coals, for example) and blue (think of cold blue ice, for example) is the "cool" side.

Because one color is pre-determined to be "warm" and one is pre-determined to be "cool" in a complementary pair, changing the temperature of complementary color mixtures is easy. Simply adding the "warm" side to any mixture of two complementary colors will warm it and adding the "cool" side to any mixture of two complementary colors will cool it.

Color temperature can be somewhat confusing to students, but complementary color schemes tend to simplify the concept because only one color can be used to either warm or cool any mixture. Often simply
changing a color's temperature or changing its value will make it "look right". Complementary color schemes make both easier.

As with our monochromatic and analogous color schemes, either of the two complementary colors or white and black can be used to change the value (lighten or darken) our complementary mixtures, if required.


Sunday Morning, Boston Common oil on linen

This is an example of an orange/blue complementary scheme. No other colors were used. Note that the orange (warm) side of the scheme is dominant, and the blue (cool) side is subordinate. Only white was used to modify value, where necessary. The "black" in this painting was made from an already dark blue (pthalo blue) mixed with orange to simulate a black that is specific to this color scheme. See section on "Notes about black and your darkest colors" in this outline. Note the range of color and value that can be achieved with only two complementary colors.

## Split-complementary color schemes

Split complementary color schemes are similar to the complementary schemes above except that we can expand one side of the complementary pair to include the two colors adjacent to it.

It's useful to decide beforehand which side of the complementary pair will be predominant in our split complementary scheme because this will be the side that will use the adjacent colors. In the case of our blue/orange scheme, we would first decide whether we want blue or orange to be predominant.
(Refer to the color wheel) If, for example, we choose a "warm" or orange scheme, we would allow the colors adjacent to orange (yellow-orange and red orange) to be included in our mixtures.

There are several mixing possibilities for split complementary schemes. If we use our blue/orange scheme as an example:

First, all three dominant colors, yellow-orange, orange, and red orange could be modified individually with blue, the complement of the center color, orange.

Second, all three dominant colors, yellow-orange, orange, and red orange could be mixed together and then modified with blue, the complement of the center color, orange.

Third, each of the three dominant colors could be modified individually with their individual complements and used together.

As with our monochromatic, and complementary color schemes, white and black can also be used to change the value (lighten or darken) our complementary mixtures, if required.

As you can see, there is flexibility and many more possibilities of color with split complementary schemes.
There are twelve possible split complementary color schemes. They are:
Yellow orange
Yellow----------------violet
Yellow green
Yellow
Yellow green--------red violet
Green

Yellow green
Green------------------red
Blue green

## Green

Blue-green-----------red orange
Blue
Blue green
Blue---------------orange

Blue-violet

Blue
Blue violet----------yellow orange
Violet

Blue violet
Violet-----------------yellow
Red-violet

Violet
Red violet----------yellow green
Red

Red violet
Red -----------------green
Red orange
Red
Red orange --------blue green
Yellow orange
Red orange
Orange --------------blue
Yellow orange
Orange
Yellow orange------blue violet Yellow


Wild Willows in the Park, oil on linen

Here is an example of a split complementary yellow orange/yellow/yellow green color scheme. No other colors were used. Yellow green is dominant in this scheme, which was modified with its complement red violet, and, if required, yellow or yellow orange. The color of the branches and trunks of the trees was derived from mixing yellow with its complement violet. Refer to the color chart Illustration for yellow under "Your Personal Color Charts" and note the browns and tan colors that can be derived from yellow. They were also warmed slightly with yellow orange. The blues were derived from the blue violet complement of yellow orange. Black was not necessary because the already dark blue violet, the complement of yellow green, was used alone to create the dark values seen here.

Most of the mixtures for this painting, then, were derived from mixing each of the three colors of the scheme, orange yellow/yellow/yellow green, with their complements individually and then, if required, modified further with one of the other colors of the scheme. Refer to the section above for other mixing possibilities of a split complementary scheme.

## Triadic color schemes

On the color wheel, a triadic scheme is based on any three colors located on every fourth position, forming an equilateral triangle. When any of the colors that on the triangle are mixed together, they will create pleasing semi neutrals.

Usually, semi neutrals made from pure color that are not direct complements tend to be somewhat dull, but when the contrasting color moves far enough away from its' direct complement the appearance of the semi neutral becomes pleasing again. Triadic schemes are based on this effect. They allow more color variety than any other scheme and create striking color contrasts.

Each color in the triad can be mixed with three possible contrasting colors to create pleasing semi neutrals. Each can be mixed with:
a. The two other colors in its triad, and,
b. The color's complement.

In addition, each mixture can be lightened with white or darkened with black.

As with most other color schemes, a color within the triadic scheme is chosen to be dominant (most visible), intermediate (somewhat visible) and subordinate (least visible)

## The primary triad

The primary triad uses the three primary colors, red, blue, and yellow. Because of this, consider that the possibilities of its' mixtures are the same as mixing all the colors of the color wheel together. The secondary and tertiary semi neutrals mixed directly from the primary colors, however, will tend to be more neutralized than if they were mixed with pure secondary and tertiary colors directly from the tube. In addition, because so many different colors are possible with the primary triad and because too many different colors in any painting will make it look confusing or disturbing to the viewer, you may want to avoid the primary triad or consciously limit the number of colors made from it. Usually a color within this triadic scheme is chosen to be dominant (most visible), intermediate (somewhat visible) and subordinate (least visible).


Bandstand in Winter Oil on canvas

This is an example of the primary triad: red, blue, and yellow. Red was chosen to be dominant and blue is subordinate, Yellow was used as accents and to warm the stonework and whites where necessary. Red, and its complement green was used in the center of interest. Because of the unlimited color mixtures that can be derived from the primary triad It's best to either limit your choice of color or limit your mixtures to complementary color mixtures as was generally done here. Try to work with monochromatic and complementary schemes first before attempting triadic schemes.

## The secondary triad

The secondary triad consists of the three secondary colors, orange, violet and green. Any two colors of the secondary triad will always share a common color, and this is where its color harmony arises. For example, orange and violet both share red, but because each also contains blue and yellow, the resulting semi neutrals mixed from the two will be more neutralized than if each were mixed with their complements.

Usually a color within this triadic scheme is chosen to be dominant (most visible), intermediate (somewhat visible) and subordinate (least visible).

## The tertiary triad

There are two possible tertiary triadic color schemes:
Yellow orange, red violet, blue green and,
Yellow green, blue violet, red orange
Usually a color within this triadic scheme is chosen to be dominant (most visible), intermediate (somewhat visible) and subordinate (least visible).

## The full range of any color

Using our knowledge of the color schemes above, we can see that there are many ways to mix visually pleasing semi neutral colors. To summarize, we could say that the full color range of any one pure color on the color wheel could be reached when the color is:

1. mixed with its complement
2. mixed with its warm analogous color
3. mixed with its cool analogous color
4. mixed with its first triad
5. mixed with its second triad
6. mixed with either black or white to change its value and/or neutralize it

## Understanding Color "Value"

Color "value" is the relative lightness or darkness of our colors and color schemes.
Our individual color mixtures can not only be similar in color, or "analogous" to each other, they can also be very different or "contrasting". An example of contrasting color is a complementary scheme where two different colors are used together, such as orange and blue. An example of analogous color is an analogous color scheme consisting of similar colors such as red-orange, orange, and yellow orange.

The relative lightness or darkness of our individual color mixtures, their "values", can also be analogous or contrasting. Scenes that are misty or foggy, for example, will tend to have values that are similar, without strong light and dark contrasts and would be painted with color mixtures of analogous, or similar value. Scenes with high contrast, such as a brilliantly illuminated window surrounded by a darkened frame, would be painted with contrasting light and dark values as in the original scene.

Analogous and contrasting values can be used to create atmosphere in our paintings or direct the eye to and from areas that are important to the artist. Values in our paintings that are in sharp contrast will tend to draw the eye to those passages that exhibit them. Passages with similar analogous values will tend to not attract
the eye as strongly. Later, in the section on "contrast", we will learn how to use this effect to call attention to the passages of our paintings that are important to us as well as subdue passages that are not.

Paintings with large areas of analogous value tend to be "calm", or "quiet" to the eye. Because of this, the use of analogous value will tend to enhance a "calm" or "quiet" atmosphere that may be desired in a painting. An example of this might be the misty, or foggy scene noted above.

## The Value Scale:

Values are traditionally measured by a "value scale", shown below. A value scale is simply a set of gray gradations of value between, and including, black and white. Any color mixture could be compared against this scale to determine the color's value.

Note: The value chart below is intended to provide a general indication of where certain values are in relation to one another and is provided for demonstration of analogous and contrasting values and the terms related to them only. In practice, a general understanding of what "light" "middle" and "dark" values look like, as well as a common sense understanding of what contrasting values look like is all that is necessary to utilize values in the practical ways that are noted above.

Our value scale is divided into nine sections with white, the lightest value, on the left, and black, the darkest value, on the right. Note that each square is named and note that any color that closely matches the lightness or darkness (the "value") on the chart could be said to be that value.

The three values adjacent to white are called "light" values. If they were used together in our painting, they would be called "analogous light" values.

The three values adjacent to black are called "dark" values. If they were used together in our painting, they would be called "analogous dark" values.

The value in the middle is called a "middle value". Some artists may also refer to the three squares in the center as "middle" values. If we were to use the center three values together in our painting they would be called "analogous middle" values.

## The Value Scale



Any three together are "analogous"
Any three values that are adjacent to each other on the scale and are also used together in our painting can be called "analogous" values. These are value combinations that could be used to create a "calm" or "quiet" atmosphere as noted above, or could also be used to subdue, or draw the eye away from passages of our paintings that we do not want to call attention to. They could also, of course, be used to simply represent the correct degree of lightness or darkness of the objects in our paintings.

Any two values that are used together but are farther apart than three squares on the value scale can be called "contrasting" values. These are value combinations that are visually striking and will draw the eye
toward passages of our paintings that we want to call attention to. An example of contrasting value would be to use the "high light" value above with any of the "dark" values on the value chart.

Artists refer to colors and color schemes that are dark in value as "low value" and refer to color or color schemes are light in value as "high value".

Paintings that are dominated by light values are sometimes referred to by artists as "high key" paintings.
Paintings that are dominated by dark values are sometimes referred to by artists as "low key" paintings.
Artists usually select one of the value categories above to be dominant, or very visible, one to be subordinate, or least visible, and one to be in between when their paintings are not primarily painted in "light", "middle", or "dark" values.

Mixing color to the correct value is sometimes difficult for students who are learning to paint. Try to use a toned ground of a warm middle value. The middle value surface improves the artist's ability to judge the value of newly applied paint because there is already a middle value on the canvas to use as a guide. The middle value ground can then be used to establish the remaining lightest and darkest values.

## Using color schemes

Consider virtually any object or scene could be depicted with any arbitrary choice of color and would still be recognizable. If we were to choose to paint our pictures with arbitrary color and the original colors of our scene were significantly modified from the original, the change in colors would still not affect our understanding of the original scene.

We have many color options available to us for our paintings. Our choice of color could be based on colors that we like, or colors that we simply think will look good. We might attempt to just copy what we see, or we could choose a color scheme that organizes and harmonizes our colors and makes sense of them where nature might not have otherwise done so.

The advantage of color schemes is that they tend to look more "harmonious", or "make sense" because their colors are related or share common colors. Artists often choose color schemes not only because harmonious color looks good but also because a color scheme may make better sense for a particular scene than nature is providing (nature seldom is concerned with organizing color in meaningful ways).

There are several methods and reasons for choosing specific color schemes. Here are a few to consider:

## Notes about selecting color schemes

Often an artist will note a dominant color or colors in a scene that he/she intends to paint and selects a color scheme that is based on that dominant color. By doing so, the colors in the final painting will be truer to the original scene because they are based on colors that are already there. In addition, by basing a color scheme on a dominant color there may be, overall, fewer colors to change in order to make them conform to the chosen color scheme.

Note: changing colors to make them conform to a color scheme is perfectly acceptable. Moreover, whatever colors or color scheme you chose is a matter of personal preference. You may, however, find that choosing a scheme that is close to the predominating colors that are already there will be easier for you to paint. With most color schemes you should expect to change some colors slightly or even dramatically to conform to the chosen scheme. Doing so will not affect our understanding of what the objects are.

A working knowledge of complementary and analogous colors always makes selecting a color scheme
easier. Bring your color wheel with you and refer to it until color relationships like complementary and analogous colors are instinctively clear to you. Look for obvious complementary or analogous colors that are dominant and try triadic schemes only after you're comfortable with complementary or analogous colors.

Keep in mind that many colors in nature are likely to be semi neutral versions of colors on your color wheel rather than pure colors, so a thorough understanding of the semi neutral mixtures of your palette will also make your color scheme selection job easier.

For example, most "brown", "red-brown" and "tan" colors are semi neutrals that are derived from either redorange, orange, yellow orange or yellow. They may not, however, be immediately recognized as being derived from them without a thorough understanding of the possible mixtures of your palette.

Sometimes selecting a color scheme is as simple as locating the most predominant color, determining what color it was derived from using the color wheel, and simply using that colors' complement to complete the scheme.

Some common examples of dominating color are shown below for your reference:
Certain weather conditions like fog, rain, snow, mist, or heavily overcast clouds may cast a dominant color (usually a cool color) over an entire scene and make your selection easier. Look for complementary colors in situations like this. For example, (refer to the color chart) if the yellow greens of summer vegetation dominate on a misty day, they could be complemented with red-violet, which, when neutralized with its complement, will simulate the gray of the cloudy sky in a yellow-green/red-violet complementary color scheme. If there were a variety of greens in this scene, try expanding the scheme to a split complementary scheme of dominant green, yellow green, and yellow modified with red violet

The light at certain times of day, like dusk or sunrise, may have a predominantly "warm" yellow orange, orange, or red-orange cast that could be used as the basis for a color scheme. This effect is even more pronounced during late autumn and winter months when the color of vegetation is less varied.

Night scenes tend to be predominantly blue, blue-green or blue-violet.
Other scenes may be obviously complementary like the classic red barn against green trees or orange leaves in autumn against a blue sky.

If one clearly dominant color is present, look for its complement or look for anything that can be changed to its complement or modified with it.

Still life painters have an advantage because they can pre-establish clear predominant colors and strategically place their complements with them because they control the selection as well as the arrangement of objects and colors of their "scene".

Still life painting is an effective way to learn color schemes.
Remember, if you can't establish a color scheme based on a predominate color, you may have a candidate for a simple monochromatic scheme. Any of the "warm" colors like yellow, yellow-orange, orange, redorange, when mixed with their complements, translate to beautiful browns, sepias and tans that make virtually anything look good.

## Your palette and the color wheel

The colors suggested below correspond directly to the colors on the color wheel.
Working with pigments that directly correspond to the color wheel and your palette will make it easier to understand some of the color concepts that are suggested here.

You could use the colors below or you could also select colors that simply look good to you and visually fit the description of the color on the color wheel, like "orange", instead of the colors suggested here.

Below are the names of some suggested pigments and their corresponding color wheel color.
Name of pigment Corresponding color wheel color:

| Cadmium Lemon | Yellow |
| :--- | :--- |
| Cadmium Orange | Yellow orange |
| Cadmium Scarlet | Orange |
| Cadmium Red Deep | Red orange |
| Alizarin Crimson | Red |
| Winsor Violet | Red-violet |
| Permanent Mauve | Violet |
| Ultramarine Violet | Blue-violet |
| Pthalo Blue | Blue |
| Manganese Blue | Blue green |
| Viridian | Green |
| Permanent green light | Yellow green |

Whatever colors you use, try to arrange your pigments in the same sequence on your palette as on the color wheel (the same sequence as above) and use that arrangement for each painting session. The position of your colors on your palette should be the same for each painting session. Rather than waste time searching for the correct pigment whenever you need one, you should instead work instinctively, knowing the location of each color on your palette. Doing otherwise will distract you from the real task at hand: painting a picture and using undistracted creativity to make it as good as it can be.

## Color "harmony"

When artists discuss color in painting, their point of view generally arises from their understanding of something called "harmony" which, simply stated, is what makes color look "right" by itself or when next to other colors. It can also be generally said that harmony is something that all the colors in a painting have in common. They could, for example, be generally "warm" or generally display a certain color or colors.

Because determining "correct" or "acceptable" harmony of color (or harmony of anything else in painting) is rather subjective, several generally accepted "points of view" are provided below, for your consideration.

## Three generally accepted points of view about color harmony in painting

Much has been theorized and written about color harmony in art but there seems to be several generally accepted "points of view". Each are valid in their own way. Below are three (not intended to be a definitive list) for your consideration:

## Creative license

This point of view proposes that creative license is all you need. If a color looks OK to you, even if it's arbitrarily created then it is OK.

There's something to be said for this. After all, no one wants their creativity constrained by a lot of rules about color or any other aspect of painting.

Clearly, there are many competent artists who have found their own unique "sense" of color and use that unique sense to create beautiful art. It may be best, however, to build a solid foundation based on principles that are generally known and understood, and then let creative license take over after those principles are mastered. This is especially true of color and color harmony. Furthermore, you should be able to demonstrate as much technical knowledge and skill as possible to those who are important to you such as potential employers, judges of art shows, juries of creative or professional organizations, etc. A working knowledge of color is one of the easiest ways to demonstrate knowledge that can separate you from others trying to do the same.

## Harmony of light in nature

This point of view proposes that harmony of color arises from the light that illuminates objects, and the colors of objects should be represented as they appear in the particular light that illuminates them. This point of view also accepts that nature presents us with many different colors and color combinations, but even if they don't seem to "go together" they should be painted as they are, as they're illuminated by the same light source.

The harmonizing element in this point of view is light because it modifies the color of things by adding a little of its own color to all of them.

Artists who adhere to this point of view generally make little effort to change the colors they see to make them conform to a particular color scheme of color wheel related colors.

## Harmony of complements and color families

In the nineteenth century, artists such as Monet, Van Gogh, Matisse and others began to incorporate the harmonizing effects of color based on their position on a "color wheel". Artists quickly took advantage of the harmonizing effects of complementary colors and colors adjacent to each other on the wheel to make purer colors that were more pleasing to look at. This point of view of color relies on the harmonizing effects of complementary colors and other colors that are related by their proximity on the color wheel.

## What makes a "good" (or "bad") palette?

Hopefully you will consider using the palette of colors suggested here because it reinforces many of the ideas about color that are discussed here. There are, of course, many other colors and color combinations to choose from. Moreover, art school or other instructors may ask you to use specific colors other than the ones specified here, or you may just like certain colors.

Your palette of colors is a personal preference, and most palettes with a reasonable variation of colors that at least includes some version of the three primaries will allow you to create acceptable colors.

One palette that is commonly used by artists is a "warm" and "cool" version of each of the primaries plus black and white. Other artists use a variation of our color wheel palette with but with more (or less) colors of their personal choice. Others just keep a huge supply of tubes and randomly set up their palettes for each painting session.

There is no "standard" palette of colors.
You may become proficient, in time, with virtually any combination of colors. Whatever colors you use, it's probably best to use a core group that seems to work best for you all the time and experiment with new colors around this core group. By using this core group repeatedly, you will, in time, realize its' potential and limitations.

The real question, though, may be "What makes a bad palette". The answer is simple. The best way to tell if you're working with a "bad" palette is if, after working with it for a reasonable length of time, you are unable to make the colors that you need. However, without a thorough understanding of the potential of your palette beforehand you may not realize that a "bad" palette is a perfectly good one.

The best way to understand the full range of mixing possibilities for your choice of colors beforehand is to "do the charts" as described in this outline (see section on "Your Personal Color Charts).

Do not underestimate the value of doing this early on. They will provide you with an invaluable source of reference, and you may be surprised by some of the color possibilities that weren't obvious before.

## Painting Surfaces

For artists that paint with acrylic and oils, the surface of the material that you paint on will affect the appearance of your finished painting. A perfectly smooth panel, for example, will either display each brush or knife stroke, unchanged as it was applied, or it could allow them to be blended to a perfectly smooth, glasslike painted surface. Alternatively, brushwork on canvas will likely display some of the "weave" of the canvas fabric under it. Moreover, if you paint with thick brushwork that is allowed to dry, the initial brushstrokes will be visible under any subsequent layers and will create a unique texture of layered brushstrokes. Each of the examples above is significantly different in appearance and will, therefore, affect the final "look" of your painting if you chose to use them.

Prior to the nineteenth century a smooth, glasslike painting surface was preferable to the rough surfaces of "impasto" paint applications. Today, however, artists are not only encouraged to apply their paint in an expressive way, but they can also incorporate the natural textures of the materials that they paint on, like the texture of the "weave" of the canvas, into their paintings. In addition, modern day artists can customize the textures of their painting surfaces with a variety of painted textures that will contribute to the appearance of the final painted surface.

Texture not only helps make our paintings look more varied and interesting, it can also make certain painting techniques such as dry brush (see glossary) easier. It can even make random patterns, like growths of vegetation in landscapes, or rough surfaces easier to paint. It can be used to simply create passages that look varied and interesting or it can be used to call attention to passages of our paintings that are important to us.

The choice of whether your paintings will have the smooth, glasslike surface of the Old Masters, or the thick impasto surfaces of the impressionists and other modern artists, or something in between, is a choice that is entirely yours to make. A decision to incorporate specific textures into your paintings, or not, may come to you in time as your painting style evolves, with experience.

There are many ways to use texture to make our paintings look more expressive and interesting. Below are several texturing options and techniques that are available to you for your consideration, as well as some information about their advantages, disadvantages, and use.

## The weave of the canvas as a texture

In the same way that textured drawing paper can be selected because of the particular "look" that it's texture will impart to a drawing, canvas can be selected because of its "weave" which will become integrated into the final brushwork of your painting and affect its surface appearance.

Canvas is often sold by "weight" which is an indication of how thick it is, but artists usually select it by its texture, or "weave" which ranges from "fine", to "medium", to "coarse" (most student grade canvas panels and stretched canvases will have a "medium" texture). The "weave" is simply the raised pattern that is created by the interwoven strands of canvas fabric. A "fine" weave is less prominent than "medium" and therefore will be less noticeable in the final painted surface.

The material that the canvas is made from can affect the quality or appearance of the "weave". For example, the tightest and most uniform weaves are usually found in linen, which is commonly available in "fine" and "medium" weaves. Cotton canvas is usually available in versions of "medium" weaves, and extremely coarse weaves are available from other materials.

Certain weaves may be better suited for certain subjects depending on the preference or the painting style of the artist. Portrait artists, for example, might prefer a finer weave that imparts a smoother painted surface because it will allow them to represent the relative "smoothness" of portrait features more effectively.

Landscape artists, on the other hand, may prefer a thicker weave for a coarser texture that will allow them to better represent, for example, the randomness of vegetation, or the roughness of certain landscape features.

Your personal painting style may also affect your selection of a canvas weave. If you paint with thicker paint, a coarser weave will provide a better "tooth" that the paint can attach itself to as you paint but this is not a requirement. Alternatively, if you use very thin applications of paint it may be somewhat difficult to paint into a heavier weave, but once again, there is no "rule" that prohibits you from doing either.

It's probably best to experiment with several "fine" to "medium" textures initially. Note how easy or difficult it is to apply your particular painting style to each and also note how various canvas weave textures affect the final appearance of your work.

Below are several examples of how canvas texture can be used to enhance your painting technique:
The weave of the canvas provides a raised textured surface that can make "drybrush" applications easier and more prominent. Dry brush is a method of applying paint where wet paint, usually somewhat thick, is lightly dragged with a brush across the surface of the canvas. The resulting brush stroke usually yields a random texture or pattern that conforms to the texture of the canvas below it.

Thick wet paint can also be scraped away to leave the pattern of the canvas weave visible. Scraping may leave the "valleys" of the weave filled with paint and the "peaks" exposed which, by contrast, enhances the appearance of the weave and creates a visual contrast that some artists consider to be a pleasing and interesting.

The contrast created by thicker impasto applications onto scraped areas or other thinly painted areas that reveal the canvas texture can also call attention to passages that are important to you.

## Brushwork as texture

The initial "ground" layer of paint can be applied with brush strokes of varying thickness that, if allowed to dry, will become incorporated into the final brushwork of the painting.

## You can learn much about brushwork technique in general by experimenting with impasto ground texture.

Below are several suggestions for applying impasto brushwork to your painting surfaces as part of the ground application, as well as for your paintings in general:

1. Bristle brushes tend to leave more prominent brushstrokes than sables and are, therefore, especially useful for impasto brushwork. In addition, bristle brushes can lift and carry more paint onto the painting surface, and therefore are especially useful for creating rich, textured painting surfaces.
2. To leave a noticeable brushstroke, you will need to load your brush with a lot of paint. Emile Gruppe, a master of thick brushwork advised his students to "Mix more than you need and use it all".
3. Experiment with a variety of brushes loaded with varying, but generous, amounts of paint. A "filbert" brush (sometimes called a "cats' tongue", with a rounded tip) will leave a brushstroke that is different in overall shape from, for example, a "flat" brush. Both will create brushstrokes of varying appearance depending on how much paint is loaded onto them.
4. You may find that some of your older, worn brushes may impart an interesting "randomness" your brushstrokes where necessary.
5. Try to vary the size, direction, and style of your brushstrokes. Brushstrokes of contrasting style and technique tend to look more interesting. Remember that the way you use a brush to paint a wall of your home (strokes of one direction) is not the only way a brush can be used. Experiment, for
example, with contrasting straight, curved, angled, short, long, lightly applied, and heavily applied strokes. You can, for example, press or touch a loaded brush directly onto the canvas rather than drag it across the surface. You can also press, twist, drag, and lift the brush straight off the canvas at the end of a stroke (or any combination of these) to create an interesting "painterly" effect. Be creative, experiment and invent entirely unique brushwork that is pleasing to you and unique to your personal painting style.
6. Experiment with paint of different consistencies. Drier paint will have a somewhat different appearance than paint that is more "buttery". For pre-texturing painting surfaces, try adding a few drops of mineral spirits to the paint to thin it if required and see the section on "Preparing an impasto ground with reduced "fat" for drier applications. For additional contrast, combine dry strokes with "buttery".
7. You can create an even richer tapestry of brushwork by first allowing the initial application to dry and then applying one or more additional layers to it. The subsequent layers of brushstrokes will display the layers beneath them.
Try using large brushes for the initial layer and smaller brushes for subsequent layers for additional contrast. Once again, experiment to find what looks good to you.
8. If you're applying texture to canvas, leaving the canvas texture visible in areas around brushwork may have a pleasing contrasting effect. If you scrape away areas of brushwork, a similar contrasting effect may be created.
9. Texturing your painting surfaces will allow you use all your paint. Save your leftover paint at the end of each paint session and apply it to a new canvas or panel as textured ground. (See section on "Preparing an impasto ground with reduced "fat")
10. Extremely thick applications of textured paint may be difficult to work into or cover with the working layers of your actual painting. For this reason, it may be useful to experiment with thinner applications of texture at first and work with thicker applications after you've studied how the thinner textures affect your personal painting style.
11. Plan ahead. Think about what kind of brushstroke you want to make, lay it down the best that you can and don't modify it any further. You may find it easier to simply remove a thick brushstroke and repaint it rather than try to rework it to get it right. Although a certain amount of "touch-up" is always acceptable, overworked impasto strokes seldom appear to be as crisp and skillfully painted as those that are undisturbed.
12. Stop and note the occasional "accident" that looks good to you. Study those "accidents" to see if they can be deliberately recreated and try to build a repertoire of brushwork techniques based on them (try to do this with all aspects of painting).

Note: Impasto applications greater than $1 / 8^{\prime \prime}$ thick are considered to be unstable and should be avoided from a structural standpoint. Extremely thick paint applications tend to trap liquid paint that cannot dry because the thick dry surfaces around them do not allow enough air to penetrate to them. This causes movement and migration of the trapped liquid paint that will cause cracking and/or seepage of paint over time.


Boxford in Rain, Oil on Panel
This rainy scene was painted on a heavily applied texture of two layers of brushstrokes that were each allowed to dry before painting the scene (a yellow, yellow green, green split complementary color scheme). In this case, the texture enhanced the misty look of the final painting by breaking up the brushstrokes and color slightly. Texture can also make it easier to represent vegetation and rough surfaces in other landscape paintings. An enlarged detail of the texture used is shown below.


## Stippled textures

Monet made stipple famous with his "cathedral" series and other paintings that were characterized by a rough sandpaper-like "stippled" surface texture.

Stipple is simply a paint texture that is made by pressing the end of a brush straight into wet paint and pulling it away, leaving small "points" in the paint where the bristles of the brush have pulled the paint away. The "points" give the paint its texture. A stipple effect can also be made with the flat blade of a palette knife or any other suitable object. Simply press the flat blade, or any object, into wet paint and pull it away.

Stipple can be created as the paint is applied or it can be applied beforehand as a foundation texture as described below.

Soft, long bristle brushes are best for creating stipple textures. Many can be used but a soft house painting brush, a watercolor "mop", or brushes of similar style work well and cover fairly large areas quickly. Experiment with a variety of brush styles to find the best for you. Softer brushes will yield a finer, lower profile texture. Stiffer brushes will yield a rough, higher profile with randomly distributed texture depending on the thickness of the paint used. The flat surface of a palette knife blade, or any other similar surface, will create randomly distributed "points" that are usually fairly high in profile, depending on the thickness of the paint.

Stipple is especially useful for panels as a foundation texture that can be followed with a contrasting layer of brushwork, but it can be also successfully used with canvas or as a single predominant foundation texture for any painting surface. The visual contrast between the stippled texture and brushwork could be said to be visually interesting in the same way that the "weave" of canvas and contrasting brushwork is visually interesting.

To create a stippled texture, paint is initially applied to the painting surface with either a brush or palette knife to a thickness that is even and thick enough to respond to the stippling action of the brush or knife that will later be applied to the paint. The "correct" thickness is a matter of personal preference and experience. It may be useful to "test" the thickness with the brush or knife you plan to use and adjust the paint thickness as required before proceeding. The paint should be thick enough to "pull" into a noticeable texture but not be so thick that the "points" fold back down on themselves.

After the correct paint thickness has been determined, try placing the painting surface in raking light to make it easier to evaluate your progress and the quality of the texture as you work. Create the texture by simply tapping the end of a brush or the flat of the palette knife blade into the paint and lifting it away. Continue until the entire painting surface is covered with an even stippled texture. You can even create interesting stipple textures with a rubber roller.

After the paint is fully dry, use medium grade sandpaper and lightly sand the "peaks" of the texture. Sanding can also reduce the overall coarseness of the texture if required or make it more uniform (avoid breathing the paint dust created by the sanding process).

The painting surface can now be used as is, or it can be textured further with additional brushwork if required. Generally speaking, extremely thick applications of textured paint may be difficult to work into or cover with the working layers of your painting. For this reason, it may be useful to experiment with thinner applications of texture at first and work with thicker applications after you've studied how the thinner textures affect your personal painting style.

## Adding texturing material to the paint

Several coarse materials, such as sand or marble dust, can be added directly to the paint to create fine, evenly distributed textures. Simply thoroughly mix the texturing material into your paint before it is applied, and the textured material will then be visible in the surfaces of your brushstrokes.

Texturing materials can be obtained from artist supply stores. Any material that is mixed with your paint should be thoroughly cleaned before using. Because of this, materials available from artist supply stores are best suited for painting because they have been specially prepared for this purpose.

Texturing materials can be mixed evenly throughout your painting or they can be used in selective areas for an interesting contrast to smoother brushstrokes that have not been textured. Texturing materials can also be used to better represent rough surfaces or can be used as a foundation texture similar to the stippled texture above.

## The advantage of a colored ground

Adding a middle value "warm" ground to your painting surface has several advantages.
A middle value ground will make it easier to judge the values of the paint used for your painting. Color values are easier to determine when they are compared to another color value that is already on the canvas. Because of this, try to prepare your canvas or panels with a colored ground that is either painted first and permitted to completely dry, or is applied when you start painting, usually with a wash.

If you're not sure what colors will be used for the final painting, experiment with any neutral, middle value, "tan", "brown" or "red-brown" colors for your final ground color. If you know what colors will dominate your painting, or what color scheme you will use, try using neutral versions of those colors, or try mixing semi neutral versions of yellow, yellow-orange, orange, or red-orange using the colors on our recommended palette. Mixtures of other tube colors such as yellow ochre mixed with burnt sienna, terra rosa, or venetian red also make nicely colored ground color mixtures.

You could also, of course, allow your ground to remain white and apply a "tone" of the color(s) of your choice when you begin painting, or you could apply one or several colors of wash over a white, dry ground. Each has a different appearance. Experiment with several colored ground approaches.

Although any white such as "Titanium" or "Zinc" will do, "Flake White", sometimes known as "Underpainting White" or "Foundation White" is generally considered ideal for preparing grounds. Flake White contains lead, so take appropriate precautions when using it.

## The "Fat over lean" rule

"Fat" and "Lean" refer to the amount of oil in paint when it is applied to the painting surface. "Fat" indicates more oil and "lean" indicates less. Paintings are usually constructed with layers of paint, one on top of the other. The "Fat over lean" rule simply states that each new layer of paint should have as much or more oil content as the layer under it.

There has been some disagreement about how the "fat over lean" rule should affect our painting technique. Most experts agree, however, that we should simply be aware of excessive differences in the oil content of the paint as it is applied.

Excessive "lean" (less oil) over "fat" (more oil) layers may cause cracking later on as the painting dries or ages. You should always be aware of this rule, but if you paint with a consistent, sound approach

## you shouldn't have to be concerned about it.

Try to start with a "lean" "block-in" of paint thinned with solvent which is easier to work with and rework early in the process. Follow the block-in with (fatter) paint straight from the tube to refine the image, and then, if necessary, finish with a final layer mixed slightly with medium. As you become more proficient, you may find that you won't need a lot more layers than these to get the job done and you may find that most paint out of the tube has a consistency that is easily workable without adding solvents or medium.

Some experts also agree that harder painting surfaces, such as wood and Masonite, for example, are less susceptible to the effects of improper fat over lean paint applications. This is because panels tend to expand and contract less over time and keep the paint layers on top of them more stable and therefore less likely to crack.

## Preparing an impasto ground with reduced "fat"

Some artists who use thick grounds that are textured with impasto (see above) recommend that we reduce the oil content (the "fat") of our impasto ground preparations before we apply them. This is to ensure that the excess thickness of the impasto ground under the first layer of paint of our painting (sometimes a thin wash block-in) will adhere to the fat over lean rule.

Reducing the oil content of the paint that will be used for our impasto ground applications is easy. Simply spread the paint thinly onto a sheet of thick brown wrapping paper, or similar paper, with a palette knife and allow it to sit for ten to fifteen minutes. The excess oil will be absorbed into the paper. Transfer the paint from the paper to your palette and you may notice that is has a drier consistency that may make your impasto brushstrokes and textures even more prominent. Add a few drops of solvent to the paint and thoroughly mix it to make it more "buttery" if required. You may find that the longer you mix the solvent with the paint the more "buttery" it will become. Try mixing it for several minutes and then compare its consistency with the dry, freshly "reduced" paint that you started with. You may be surprised by the stark difference in consistency between the two.

## Focusing on The Subject

## Understanding the subject

Before you start painting, ask yourself what attracted you to this particular image. Try to put it into words. Try to say out loud what the subject of the painting is. (This may be difficult in classroom settings when the instructor may have pre-selected what you will paint. In classroom situations where the subject is other than a portrait, try to identify any clear center of interest, a dominant object, shape, or color for example, and focus on that as the subject).

The subject doesn't necessarily have to be a single object. It may be an atmospheric effect, a beautiful display of color, a powerful display of contrasting color or values, or it could be a calm and harmonious display of analogous color or values. It could be simply an interesting arrangement of picture elements (composition) or beautiful and interesting shapes or it could be many other things. Your subject is a personal choice that only you can make.

It's best to understand what the subject, theme, or focus of the painting will be before you start painting. Doing so early in the process will enable you to accentuate the subject and subdue anything that you feel will detract from it. In this way, when the painting is finished the viewer will clearly understand exactly what was important to you.

Whatever you determine your subject to be, fix it in your mind and stick to it. Don't allow yourself to get
distracted with excessive detail that will take the viewers' attention away from it and use all the techniques and resources that you can to attract the viewer's attention to it.

## Attention to detail: a storyteller analogy

It could be said that the skill of a good writer rests not only in his/her ability to tell a story, but also in his/her ability to omit details that distract from it.

We would quickly become bored if a writer began to describe, in excessive detail, things that have nothing to do with the characters or plot. A good writer suggests detail in a way that allows the reader to fill in the details for him/herself. In this way the reader enjoys the story more because he/she has actually contributed to it in a very personal way. It's the same with painting. Try to know the story that you want to tell (the subject) and tell it clearly. Avoid describing things that have little to do with the theme that you are trying to convey.

## Calling attention to the subject

Predetermining the subject of your painting will make it easier to accentuate the important, dominant passages from the start and at the same time subdue the passages that should be subordinate to them.

Note: Too many passages that compete for the viewer's attention may be confusing or chaotic. Try to limit the passages that are clearly the most important (sometimes called the "centers of interest", or "focal point") to no more than two. If two are used, try to make one the "primary" center of interest (the most important and therefore most dominant), and accentuate it more than the other, sometimes called the "secondary" center of interest.

Certain subjects, like those that deal primarily with atmospheric effects, may not lend themselves to obvious "centers of interest". Moreover, some artists deliberately choose to avoid a clear subject or center of interest but instead rely on the viewer to explore an even distribution of picture elements like color and value.

Generally speaking, though, most artists prefer a subject, center of interest, or "theme" that can be focused on and clearly presented to the viewer.

Once again, don't get distracted with excessive detail that will take the viewers' attention away from the subject of your paintings, and use all the techniques and resources that you can to attract the viewer's attention to it.

## Contrast

One of the most effective ways to accentuate or call attention to important passages in your painting is to display contrast within or around the passages that you want to call attention to. Contrasting elements of your painting will attract the viewer's eye and lead them to the specific places of your painting that are important to you. Several time-honored techniques for displaying contrast and other methods for calling attention to important parts of your painting are noted below for your consideration.

## Contrast of value

The strongest contrasts of value occur when the lightest values of your painting are adjacent to, or in the immediate vicinity of, your darkest values. Because the viewer's eyes will be drawn to those areas, keeping them within your centers of interest will tend to call attention to them. Try to avoid strong value contrasts outside your centers of interest.

The eye will also tend to be drawn to the lightest passages of your painting. Think of your lightest values as a spotlight on a stage. The viewer will tend to study what is in the spotlight and then will search the areas around it. For this reason, try to avoid placing your lightest values outside your centers of interest.

Because of this "spotlight" effect, your darker values can be used to showcase the lighter values within areas that are important or can subdue areas that you do not want to call attention to. A common technique in landscape painting is to use the darker shadows of clouds or trees to strategically place certain areas, the foreground for example, in shadow to redirect the eye over them and toward the middle and background beyond.

Portrait painters for centuries have used obvious "spotlight" effects to illuminate the obvious center of interest of the portrait. This effect relies on strong contrasts of value.


Chinatown, Boston oil on canvas

This is an example of extreme contrast of value. The white gate in this painting is brilliantly illuminated by the sun, which is also casting dark shadows behind it, creating a striking contrast. This contrast draws the eye to it and then invites us to explore the depth of the background beyond. Looking for any level of value contrast can lead you to your next subject. The early morning sun (as here) or the late afternoon sun tends to make horizontal shadows that make interesting things stand out more.

## Contrast of color and color intensity

When adjacent to each other, complementary colors, especially those with "purer" or "less neutralized" color will display striking color contrasts and will tend to draw the eye to them. Use complementary color contrasts within your centers of interest wherever you can to call attention to them.

It's sometimes useful to hold back and deliberately neutralize colors for the purpose of allowing the purer ones, the ones that describe the most important things that you want people to see, to take center stage.

Think of your purer colors as another kind of "spotlight" that will draw the viewer's eye in the same way that lighter values do (see above) and think of your neutralized colors as the shadow areas that surround the spotlight. The viewer's eye will tend to rest on the purer colors and will tend to not explore the neutralized areas surrounding them. Our neutralized colors, then, can be used to showcase our purer colors because of the contrast between them. For this reason, try to reserve purer colors for accentuating your centers of interest and try to reserve your more neutralized colors for areas that surround them or areas that need to be subdued.

## Contrast of paint application

Paint can be applied with thin transparent washes, thick opaque brush strokes or knife strokes, or with paint applications that are in-between. The viewer's eye will be drawn to thicker brush or knife strokes because they are more visible and interesting to look at. Thick brush and knife strokes (called "impasto") can be made even more interesting when applied onto a contrasting field of wash or thinly applied paint. For this reason, you may find it useful to pre-plan your brush and knife work to include strokes of contrasting thickness within your centers of interest or other passages that you want to lead the viewer's eye to.

Note: It's usually best to reserve your thicker "buttery" brushwork for the last stages of your painting where they can be strategically and deliberately placed to accentuate the specific areas that you want to showcase. In this way you may avoid a thick buildup of preliminary layers that may become difficult to work into as you go along.

Try to note the occasional "accident" that looks good to you. Study those brushwork "accidents" to see if they can be deliberately recreated and try to build a repertoire of brushwork techniques based on them (try to do this with all aspects of painting).

Think of thick brush or knife strokes as actually calling out to the viewer to look at the specific places you're trying to showcase.

## Contrast of focus, brushwork edges, and "lost and found" edges

The eye naturally seeks out and rests on areas that are clear and "in-focus". For this reason, passages that are relatively "in focus" can be used as yet another "spotlight" to separate our centers of interest from the less important "out of focus" passages of your painting.
"Out of focus" passages do not necessarily need to be blurred or fuzzy in appearance to be effective. A very slight difference in focus will separate areas that draw the eye ("in-focus") from those that recede and do not draw the eye (out of focus).

The appearance of focus in our paintings arises from the degree of blending of the edges of our brushwork. For example, most of our paintings contain separate objects or areas that are adjacent to one another. When we paint the "seam" between them, the brushwork that creates the transition can be relatively unblended or "sharp" (appear in-focus) or it can be blended together and "softened" to some degree (appear

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out of focus).
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Transitions of value and color within larger areas could also be "softened" or blended to create this effect over larger areas, if required.

Sharper edged brushwork can be used to draw the eye to our centers of interest and softened brushwork can be used to help remove less important areas from them.

A variety of softened and sharpened brushwork edges can be also used throughout an entire painting to simply provide an interesting and varied appearance. When used this way, the brushwork is sometimes referred to as "lost and found" brushwork that many artists consider a pleasing effect. The outlines of objects are often rendered in this way with strategically placed "sharp" and "soft" edges. The alternating sharp and soft edges cause the viewer's eye to move naturally through the painting as it finds and rests briefly on the sharp, clear edges and slides over the soft, vague edges. "Lost and found" edges, then, are yet another device that can be used to redirect the viewer's eye to the specific places we want it to go.

## Suggestions for creating and using edges:

Brush stroke edges can be created or modified by:

1. Blending them to create soft edges, or not blending to create hard edges.
2. Mixing and separately applying intermediate colors adjacent to each other instead of blending, and:
3. Applying intermediate colors and blending them.

Generally speaking, blending is easier when done with a generous amount of paint. Any type of brush can be used but softer sable brushes tend to blend paint into finer gradations that make softer looking edges. Edges can be modified with the brush that applied the paint, or after the paint has been applied with a clean, dry brush.

Specialized brushes called "blenders" are specifically made for blending and are available from art supply stores. Blenders are intended to be dry and clean when brushed into wet paint. They also should be thoroughly cleaned with solvent and then rinsed with soapy water and dried after each use. Usually, however, the brush that the paint was applied with is sufficient.

Edges are easier to create and modify when an object is painted slightly beyond the boundary of its edge and then painted back into the edge with the color of the surrounding area. As the paint from both areas meet, they can be blended and repainted as required to achieve the proper "look" of the edge. Some artists refer to this as "cutting into" the paint to create an edge.

Palette knife strokes will tend to have a crisp, hard edge at the beginning of the stroke where the edge of the knife first meets the painting surface. The appearance of this edge may be more predictable than the edge(s) at the end of the stroke where it may need to be modified with either a brush or another knife stroke.

Blending is a fairly easy technique to learn and with practice it should be easy for you to create soft or hard brushstroke edges. The question, though, may be where to apply them. The list below (not intended to be a definitive list and taken from my understanding of the use of edges only.) will offer some suggestions.

1. Generally speaking, objects within a painting's center(s) of interest should be painted with sharper edges than areas that are outside them. This is because whenever our eyes focus on something, the surrounding areas will naturally fall "out of focus". Because our centers of interest are intended to be the primary focal point of our painting, sharper edges within them will communicate to the viewer where we intended our primary focal points to be and will ensure that they are explored more thoroughly than other areas.
2. Objects outside of the "centers of interest" and objects behind other objects will tend to have softer edges for reasons that are opposite to the above.
3. Edges closer to the light source or directly illuminated by it will tend to be sharper than edges farther away, or in shadow.
(Note: extremely bright light, such as the sun, may have the opposite effect if the object is very close to the light source. In this case, edges may be softened by the radiance of extreme light, which may partially obscure our view of the object)
4. Edges of curved objects that curve away from the light source will tend to have softer edges.
5. The surface of an object itself will determine the appearance of its edges. Objects that are hard will tend to have hard edges and objects that are soft will tend to be the opposite. The surface of a peach, for example, will have softer edges than an apple simply because its surface is fuzzy and softer.
6. Edges that separate sharp contrasts of value will tend to have sharper edges than those that separate slight value contrasts.
7. Squinting tends to exaggerate the appearance of edges and may give you a better visual clue where sharp and soft edges appear. You may find that edges within areas of slight value contrasts may blend together or actually disappear while squinting and may look better if painted as they appear in the squinted image.
8. Edges of objects very far away will have softer edges than objects that are closer to us because the atmosphere separating us from the object will have a softening effect. Certain weather conditions, like mist, fog, or rain will have the same effect. Dry weather will tend to produce sharper edges, while very humid weather will tend to produce softened edges.
9. Strategically placed hard or soft edges can be used to direct attention to (or remove attention from) areas where either type of edge overly dominates. Hard edges, for example, tend to attract the eye and will call attention to an area overly dominated by soft edges, if required. Soft edges tend to subdue and remove attention and can be used to modify areas overly dominated by hard edges accordingly.
10. Alternating hard and soft edges within larger areas or along a single edge, sometimes called "lost and found edges", can be used to simply keep the viewers eye moving across the painting. Alternating hard and soft edges will tend to cause the eye to move and explore as it is encouraged to slide over softer (lost) edges and rest briefly on hard (found) edges.
11. Remember that "hard" and "soft" are relative terms. Edges do not have to be either very "sharp" or very "fuzzy" to be effective. There may be varying degrees of either type of edge within a single area of a painting. Edges of varying degrees of "fuzziness" can be used to call varying degrees of attention to specific areas of our paintings. The sharper the edge, the more it will attract the viewers eye.

## Using Contrast to Achieve Visual Balance

Contrast of value, color, and paint application are used by many artists to not only provide interest and call attention to important passages of their paintings, but they can also be used to provide visual "balance", sometimes called visual "equilibrium".

Visual balance is like compositional balance (see section on composition) except that instead of creating the effect of balance from an arrangement of objects and spaces in our paintings, we create it by combining contrasting methods of representing them, such as color or value.

This type of balance is usually achieved by strategically introducing opposite sides of one or more picture elements such as color or value into our paintings and adjusting the ratio between the two until they look "right" or "balanced" together. Their exact ratio is a matter of personal preference and, as with compositional balance, may be expressed or "felt" differently among artists.

For example, many elements of our paintings like color (also see the list below) will have a corresponding "opposite". Complementary colors could be said to be true opposites. To achieve visual balance between two complementary colors (such as orange and blue) within our painting, usually one would be chosen to be dominant, or most visible, and one would be chosen to be subordinate, or least visible. This is already one of our requirements for "complementary" and other color schemes. Many variations of the ratio of our orange to blue could be acceptable, but when the ratio looks "correct" to us, we could say that they are "balanced" as long as one remains visually dominant. In the case of complementary colors, when we adjust the ratio between the two, we also adjust the ratio of "warm and "cool" areas of our painting (see section on color temperature). We could apply this concept to a small section of our painting that uses complementary pairs, or across an entire painting.

Contrasting value could be used in a similar way. A painting could be painted primarily with light values that are balance with smaller areas of darker values. Another painting dominated by middle values could be punctuated with a contrasting and subordinate dark value, if required, to improve its visual balance, and/or to simply provide interest. Wherever we introduce contrasting elements into our paintings, one should be dominant, and one should be subordinate, and both should be represented in proportions that appear pleasing to us.

As with compositional balance, it's easier and more pleasing to visually explore a painting when there is something dominant that the eye can easily find, explore, and then move on to something else that is subordinate to it. Equal representations of opposite pairs of painting elements within the same painting are traditionally not recommended because both will compete for the viewer's attention. This is because when the opposing pairs are equally represented, a dominant feature is lacking. This effect has traditionally been thought to be disturbing and undesirable. For example, a painting should not be equally divided into "warm" and "cool" areas, or equally divided into dark and light values. One or the other should dominate.

All the contrasting elements noted in the paragraphs above can also be used to achieve visual balance. For your reference a list of them, as well as a few more that can be used to improve visual balance is included below, along with their opposing characteristics. One, some, or all can be used within the same painting with one side of each, preferably, dominating.

## Name of Painting Element

## Opposite Pairs of the Painting Element

| Color complement | $\qquad$ red/green, yellow/violet, blue/orange, yellow orange/blue violet, blue green/ red/orange, yellow green-red violet |
| :---: | :---: |
| Color Temperature | cool/warm |
| Color intensity | ---pure color/neutralized color |
| Value | dark/light |
| Paint application | -thin (wash)/thick (impasto) |
| Brushwork shape | short/long, straight/curved, |
| Brushwork size | large/small |
| Brushwork edges | ---sharp/blurred |

## Notes about composition

Composition, sometimes called "design", is simply an arrangement of objects and spaces within the working area of our artwork.

You may find that many contemporary books on the subject are confusing at best and seldom propose the commonly accepted notion that any arrangement is really a matter of personal choice. Certainly, no single set of compositional formulas can, or should, apply to everyone.

The most effective compositions, however, could be said to be those that call attention to areas that are most important to the artist. These areas are called "centers of interest" or "focal points". Determining the most important part(s) of any scene that you intend to paint beforehand may give you a starting point that you can use to compose the rest of your painting. Establish your "center(s)" of interest first and then use all the tools available to you to call attention to them.

Although the thoughtful use of contrast such as that of color intensity, color temperature, value, and brushwork, could be used to call attention to important passages of our paintings, other methods not directly related to painting technique can be used as well. Traditionally artists have also considered compositional devices such as "balance", "perspective", and occasionally geometry for achieving "correct" arrangements that organize objects and space as well as direct the viewer's eye in some way.
Some of these devices (not intended to be a definitive list) are described briefly below for your consideration.
It should be said, however, that any arrangement is acceptable if it makes sense to you.
Until you are confident with your compositional skills, study the works of your favorite artists or use the methods suggested here until you have a better "feel" for compositional arrangements. If you study the works of your favorite artists, try to determine what the artist intended the subject or primary center of interest to be and then try to determine what techniques or devices were used to call attention to it.

## Acquiring an intuitive, personal sense of arrangement, however, should be your goal.

## Balance

Compositional balance is a subjective concept that simply deals with the overall arrangement of things and spaces within our painting. Spaces, as well as objects, could be thought of as having visual "weight" that can affect where they are placed in our painting. A large area of open sky, for example, would have more visual weight than a smaller area of landscape below it simply because it is taking up more space. The "correct" size of either the sky or the landscape below it is a matter of personal preference and many variations could be acceptable, but when their relationship looks "correct" to us, we could say that the arrangement is "balanced".

Balance is something that we all "feel" differently and because of this it may be easier to list some of the effects of compositional balance that artists have traditionally tried to avoid, rather than to define it more precisely. Reasons for avoiding them (taken from my personal understanding of them only) are included below.

It could be generally and traditionally said, then, that better balance in a painting could be achieved if you:

1. Avoid symmetrical arrangements

Generally speaking, it's easier and more pleasing to visually explore a painting when there is something dominant that the eye can easily find, explore, and then move on to something else that is subordinate to it. Symmetrical arrangements traditionally are not recommended because
everything in them competes for the viewer's attention because a dominant feature is lacking. This effect has traditionally been thought to be disturbing and undesirable.
2. Avoid objects or lines, like horizon lines, in the center of the painting For the same reason as above, by placing lines or objects at the center of the painting we divide the space of the painting into equal parts and this tends to make both spaces compete for the viewer's attention. This effect has traditionally been thought of as disturbing and undesirable.
3. Avoid arrangements that crowd a lot of objects into one area of your painting Too much crowding tends to confine the eye to small areas and therefore limits its ability to naturally explore other areas of the painting. "Spreading things out" in an asymmetrical way tends to allow the eye more freedom to explore things and spaces and find interest over a wider area, thus wasting less visual space.
4. Avoid very large, very empty spaces

Although very large empty spaces can be successfully used to direct the eye to smaller areas around them that the eye will naturally seek out, they will tend to confine the eye to those same smaller areas. Because of this, like the "crowding" effect above, they tend to confine the eye to a small area and keep it from exploring and finding interest over a wider area, thus wasting visual space.
5. Avoid primary or secondary centers of interest at the center of the painting

Although a single center of interest at the center of our painting can successfully call attention to itself (as, for example in certain portraits), it will also tend to divide the remaining visual space into equal parts. Dividing the space in this way may awkwardly compete or demand attention from the center of interest. Moreover, if both a primary and secondary center of interest is used and one is placed at the center, we effectively confine the eye to one half of the painting.
This is the same as "crowding" everything onto one side. "Spreading things out" in an asymmetrical way tends to allow the eye more freedom to explore things and spaces and find interest over a wider area, thus wasting less visual space.
6. Avoid arrangements that are equally spaced or overly repetitive Although repetitive features can be successfully used to "lead" the eye toward something, large, equally spaced, and repetitive features risk dividing the working space into equal parts. This effect is similar to a symmetrical arrangement where all the features compete for the viewer's attention because a dominant feature is lacking. This effect has traditionally been thought of as disturbing and undesirable.

## Perspective

We have been traveling on roads for centuries and perhaps it is because of this that our eyes tend to follow the converging lines of perspective. One of the most obvious perspective devices is just that, a road or path that recedes into the distance. This has been a device used by landscape artists for centuries. The eye will follow the receding lines as if it were traveling the road. In the same way, the perspective lines of buildings or other structures will similarly cause the eye to be redirected to the place where they converge if they have a common and obvious converging point.

Much has been written about perspective, especially as it relates to drawing. Try to familiarize yourself with its basic principles from a practical drawing standpoint and as a tool that can be used as a compositional device to redirect the viewer's eyes.

A detailed treatise on the subject is, however, beyond the scope of this outline.

## Rhythm

Rhythm, sometimes called "line", is simply an arrangement of objects, features or spaces that will "lead" the eye from one place to another and, ideally, to a center of interest.

In landscape painting, for example, its common to lead the eye into the picture by strategically placing interesting passages in the foreground, middle ground, and distance that invite the eye to explore each and then move on to the next. By doing so, the eye of the viewer travels into and through the picture in a pleasing way. Similarly, still life painters will deliberately arrange objects in an obvious and logical progression that will attract the eye and invite it to move on to other passages.

Rhythmic passages are not scattered in a random way, but rather show a clear progression to something, preferably a center of interest.

Rhythm is another somewhat subjective concept that many artists "feel" differently from others. Study the works of your favorite artists and look for rhythmic passages that make a logical progression from one place to another and note them for future reference.

## Several compositional aids

If you are not comfortable with your own personal "feel" for the arrangement of things, there are several time-honored techniques that will enable you to organize your working space into visually pleasing areas that can help you arrange things in your painting.

Several are suggested below for your consideration:

## The square of the rectangle

This is a simple method of organizing the picture space. With your canvas positioned horizontally in front of you, simply make (or imagine) a vertical line as far from the left or right edge as the dimension of the width of the canvas (if your canvas size is $12 \times 16$, make a vertical line 12 inches from either edge). The canvas is now divided into two sections using the precise relationship of your canvas length and width. Note that one side is a square, sometimes called the "square of the rectangle".

Divisions of the picture space made directly from the dimensions of the canvas in this way are thought to contribute to naturally pleasing and "correct" compositional arrangements. The drawn (or imagined) line can be used to place important things like your center of interest. They could be used as a guide, and do not have to be precisely located exactly at the line. The square of the rectangle can be used for horizontal as well as vertical format paintings and drawings. The illustration under the section "The Primary Triad" is an example of locating an obvious center of interest using the square of the rectangle as a guide.

## The rule of thirds

Photographers sometimes compose using a method called "the rule of thirds". Simply divide the length and width of the canvas into three equal sections. This will create four lines as well as four intersections of lines and nine square areas that could be used to approximately position your centers of interest or other important features.

## The golden section

Leonardo Da Vinci, George Seurat, and Salvador Dali are just a few of the artists who have used the golden section, sometimes called the "Divine section" as a compositional device throughout history. For centuries, it has been considered an ideal method for dividing the picture space into vertical as well as horizontal proportions that can be used to organize our picture elements in a pleasing way. As with perspective, a treatise on the golden section is beyond the scope of this outline. For more information on the golden section as well as some of its fascinating history, search the internet for "the golden section in art".

## The viewfinder

A viewfinder is simply a small card with a rectangular cutout in the middle that is used to visually isolate certain parts of a scene that we intend to paint. The cutout is usually the same ratio of length to width (the "aspect ratio") as the canvas that will be used to paint your picture. Simply hold the viewfinder in front of you and "frame" the view that you intend to paint with the opening. By moving the viewfinder across the scene, you can reposition it and test many variations of composition until an ideal one is found. Isolating a scene from its surroundings often makes selecting one of several variations easier and many artists use viewfinders because of this.

Several versions of manufactured viewfinders are now available from artist supply stores. Some even allow you to adjust the aspect ratio to accommodate several canvas sizes. Homemade viewfinders are easy to make, however. Simply cut a $4 " \times 5$ " rectangle from a dark colored piece of cardboard or matboard and then carefully cut a $2.4^{\prime \prime} \times 3^{\prime \prime}$ rectangular opening (this is the same aspect ratio as most standard canvas sizes) from its center. This opening should be adequate to view any scene at arms-length. Move the viewfinder closer to you to include more of the scene.

An adjustable aspect ratio viewfinder could be constructed from a larger viewfinder that is cut to make two "L" shaped sections. When both are placed together, the rectangular opening in the center can be adjusted by sliding both halves back and forth or up and down.

Once again, any arrangement of picture elements that is pleasing and correct to you could be considered correct regardless of whether it was created with mathematical formulas or from intuition. If you are not confident with your compositional skills, study the works of your favorite artists or use the above methods until you have a better "feel" for compositional arrangements.

## Notes About Shadows

Those who are new to painting often think of shadows as the absence of light and represent them as flat, featureless areas. Viewing them as simply exhibiting less light and understanding how shadows behave in a variety of lighting conditions will help us represent them more accurately and improve their appearance.

As we know, shadows are a simple effect of light. Light illuminating an object will cast a shadow on surfaces where the object blocks the light that illuminates it. The appearance of the shadow will depend on the intensity of the light, the angle of the light, and light reflecting into the shadow from other objects or even the light filled air surrounding it.

Here are several examples of shadows in various lighting conditions to consider:

1. Shadows in bright light, such as on a sunny day will tend to have sharper edges.
2. Hard objects such as a house will tend to have sharper shadow edges than, for example, the ground shadow of the upper branches and leaves of a tree which may exhibit the "fuzzy" shadow edges of the diffused light between the openings of the branches and leaves.
3. On a clear day, the shadow of the tree above will tend to reflect the color of the sky and become cooler. This is more pronounced with distance when the angle of the light source casts longer shadows.
4. On cloudy days, where the light is more diffused, shadows will tend to be "fuzzy" and shorter.
5. Shadows will be sharper where the shadow meets the object that makes it. The shadow of a house in sunlight, for example, will be sharper where the shadow meets the house and will become less sharp with distance. This is because with distance, ambient light will soften the shadows edges that are further away from the object.
6. Objects that are illuminated by light and are adjacent to the shadow may reflect light and some of the color of the object into it.
7. Always look for "light in the shadows" which can be indicated by small changes in value within the shadow.
8. The exception to the above is moonlight, which will illuminate objects but is too weak to reflect into the shadow it creates. Moonlit shadows, then, are flat and dark.
9. The color of the light filled air surrounding the shadow will contribute to the color of the shadow. The color of the light close to sunrise or sunset, for example, will tend to exhibit more yellow or yellow orange and will tend to display their cool complement, violet or blue violet, into shadows. The same applies to indoor lighting. Incandescent light, for example will tend to lean toward yellow and will tend to add its complement violet to shadows.
10. The color of an object in shadow is often simply a neutralized version of the color of the object. Grass in summer, if yellow green, for example can be modified with its complement, red violet to create its color and value in shadow. Alternatively, neutralizing the color with black will have a similar effect.
11. Generally, if the color of the illuminating light is warm, the colors within shadows will be cool and vice versa
12. Shadows of objects far away will tend to be "fuzzy" also because of the diffusing effect that light has on shadows over distance

Shadows can also be used as a tool to emphasize areas that are important to us. Shadows can be used, for example, to create dramatic contrasts of value that draw the eye toward illuminated, or colorful areas that are important to us. They can also be used to subdue areas that are less important and make them less noticeable.

Finally, shadows can help you find your next subject. Although you can find material anywhere, and at any time of day, the angled light of the few hours before sunset and after sunrise tends to cast longer horizontal shadows that sometimes frame interesting things of lighter value. There are examples of this in this treatise, including the illustration below.


Melrose Skyline at Sunset Oil on linen
This is a blue orange complementary scheme of two ancient Victorian era buildings in my home city at sunset. The shadow of the building in foreground provides a strong value contrast that focuses attention on the color and interesting shapes of the building beyond. Note that there is still muted detail that can be seen within the foreground shadow. It is not a solid, featureless dark value. The raking light of the setting sun creates shadows that frame the interesting shapes of the gables, drawing the eye to them. Note that although the roof is a warm "tan" color, the shadows there are long enough to reflect some of the blue of the blue sky. The shadows at the gable peaks are darker and sharper where they meet the gable, then soften and lighten as they extend toward left. The narrow shadows within the brick face aren't wide enough to reflect the color of the sky or catch ambient light. Their narrow width and the intense light prevent this. Nevertheless, they are not black, but are a cool, dark version of my blue and orange complements. The intense light also makes the edges of these "narrow" shadows sharp.

Note the two shadows at the building to left, shown below.


The shadow at lower left is from a building far to the right and therefore is "fuzzy" when compared to the angled shadow above it. Light, over distance tends to soften the edges of shadows.

## Planning Ahead:

Paintings often " $g o$ in the wrong direction", "don't go anywhere", or become overworked because there was no planned direction early in the process. Because of this, you may want to incorporate a certain amount of common-sense planning into your working habits to help keep your paintings "on track". A certain amount of pre-planning has several advantages. You may find, for example, that planning will promote a fresher, more skillful looking painting style that may also be executed more quickly than if painted in a haphazard manner. This is because it's easier execute pre-planned passages of a painting than to haphazardly try to find what "looks right" to you as you paint. An organized, deliberate approach to painting will also help promote a painting process that will, in time, become intuitive to you. Below are several suggestions that may help you organize the painting process.

## Visualization:

Visualization is simply imagining what you intend to paint, as it might look painted, before you begin. Previsualized passages of paintings can become a clear plan for how you intend to proceed. Furthermore, if you have a general idea of what you want your painting to look like beforehand, your painting will probably be executed more directly, with less rework.
Visualizing a painting before you begin doesn't mean that every detail should be envisioned and planned. Often, simply stating out loud what you expect your final painting to look like may be sufficient.

Visualization is an acquired skill that will become easier for you with experience. With experience, you may, for example, be able to refer to previously painted successes for certain effects, techniques, color choices, or a particular "look" that you were pleased with. Experience will also make your painting options clearer to you and will make it easier for you to envision how certain techniques or effects will look for a subject or scene. You may even find that your selection of subjects may change simply because your ability to "see" what certain subjects could look like in paint has improved.

Until you're comfortable with the painting process, study the works of your favorite artists and try to imagine your subjects painted in a similar style. If you can envision your subject painted in that style, fix the image in your mind and make a conscious effort to plan ahead to recreate the effect or technique that you are looking for and try to paint it as directly as possible.
Below is a list of questions (not intended to be a definitive list), whose answers may make the visualization process easier for you. Each question's answer could potentially change the way your subject or scene may look after it is painted. Try to visualize each of these changes in paint and if you choose to paint them, try to paint them as directly as possible. Finally, give yourself a generous amount of time to evaluate and plan your painting. Often, simply studying a scene for a reasonable length of time will make options apparent to you that weren't initially apparent.

## Questions to ask during visualization:

1.Can excessive detail be simplified?
2. Is there a clear "center of interest" that can be focused on and emphasized?
3. Can the arrangement objects in the picture be changed or rearranged to improve the composition?
4. Are there dominant colors in the scene that could be used to select a color scheme?
5. Can purer color be used to call attention to areas that are important or can neutralized color be used to subdue areas that are not important?
6. Should strong or weak value contrasts be emphasized or subdued to call attention to important passages?
7. Can sharp or softened brushwork edges be used to call attention to or draw attention away from important passages?
8. Could impasto, drybrush, or palette knife applications be used to call attention to important passages or simply to add interest?

## Organizing the painting process:

You may find it helpful to organize the painting process into logical steps that can be dealt with individually before moving on to the next. Your list of painting steps should mirror the logical sequence that you use to paint in order to avoid rework later in the process.
Always try to give yourself more time than you think you will need to complete each painting task (see section on "Time and Creativity). With more time than you need, you will always be "ahead" and have the psychological advantage necessary to keep time constraints from affecting the quality of your work.

The following is a suggestion for organizing the painting process, for your consideration:

1. Study, compose, and visualize your subject or scene (see "Visualization", above, and section on "Composition").
2. Establish shapes and complete the initial block-in (see section "The Block-in")
3. Resolve center(s) of interest (see section on "Understanding the Subject")
4. Refine overall values and color

Try to be aware of when each step is complete and then take a short break before moving on to the next. Use this time to clean your palette or to do something other than look at the scene that you are painting (see section on "The Art of Looking Away"). This will tend to refresh the scene in your mind, and you may even notice that some aspect of your work may need a correction that was not apparent before the break.

## Notes About Drawing:

Drawing is often thought of as a graphic process that is executed with traditional materials only, such as pencils or charcoal that will produce both "linear" effects (made with lines) and "tonal" effects (made with smooth gradations of value). The creation of shapes with any two dimensional medium, however, can be called "drawing". Whenever we paint a shape in a painting we are "drawing" that shape regardless of whether we draw it with lines or tonal areas, and regardless of our use of paint. We can optionally draw our shapes and establish our values using "linear" features, "tonal" features, or combinations of both.

Nature tends to display more tonal effects than linear. Paint, although capable of representing both, is unsurpassed for representing tonal effects. This feature of paint, along with its ability to impart accurate color and value, make it ideal for representing nature as it appears to the eye. When we "paint", then, we are actually "drawing" shapes, values, and the effects of light and atmosphere with paint. Because of this, drawing could be said to be central and indispensable to the painting process.

## Virtually everything that we do with paint has some aspect of drawing associated with it.

Most representational artists agree that when we consider the many important aspects of painting such as color, composition, value, paint application, and drawing, for example, it is drawing that could be said to be the most important. This is primarily because incorrectly drawn shapes are easily detected even by an untrained viewer and drawing problems cannot be easily masked or hidden by other aspects of painting or other painting techniques even when they are skillfully applied. Furthermore, drawing is especially important because our drawing skills affect our ability to represent our paintings as we envision them beforehand to, for example, make improvements to what nature is providing (see section on visualization). Clearly, an ability to accurately create the shapes that we see, as well as the shapes that we visualize, is advantageous. Even artists who paint with abstraction can benefit from drawing skills that enable envisioned shapes or images to be faithfully reproduced as the mind conceived them.


Most representational artists agree that when we consider the many important aspects of painting such as color, composition, value, paint application, and drawing, for example, it is drawing that could be said to be the most important.

It could also be said, however, that rendering nature exactly as it is presented to us is not as important as rendering it as we need it to appear for our paintings. Changing the shapes, values and the effects of light and atmosphere that nature presents us with is perfectly acceptable to improve our paintings, and the degree of precision that we use to represent things is a matter of personal preference. Drawing skills will enable us to represent what we see to any degree of accuracy that we require, and our final paintings will look more like what we intended or expected them to appear.

Accurate rendering of what we see, or what we pre-visualize, can be best achieved by improving our drawing skills and the best way to improve our drawing skills is to draw, and to draw often.

Many artists spend considerable time developing or refining their drawing skills. Try to carry a sketchpad wherever you go and try to draw whenever you can. Sketching and drawing accomplishes several things that can be directly applied to our paintings. First and foremost, drawing trains the eye and hand to work together to accurately represent the shapes and effects that we see. Drawing also forces us to look closer at things and by doing so we acquire a better understanding of them. The relationships between shapes and values also become more apparent as our eyes explore and analyze what we are drawing. This helps us to understand the image even further. In addition, the process of analyzing shapes and values as we draw them often provides us with visual information that can be applied generally to our art such as, for example, how shadows and values appear in certain light, or how certain atmospheric conditions affect what we see.


This sketch was done on a $5.5 \times 8.5$ inch sketch pad, a size that, for me, is perfect for quickly drawing on site. Try to take a sketchbook wherever you go and draw as often as you can.

You also may find that the drawing process itself will tend to fix your visual memory of what you are drawing for future reference. You may also be surprised by how much visual memory is refreshed by referring to simple sketches later on.

A useful way to combine drawing with painting is to work with monochromatic color schemes or
monochromatic block-ins (see sections on each). Working in monochrome allows shapes and values to be created simultaneously and may actually reduce the time necessary to complete your drawings. Working with monochromatic washes also allows corrections and refinements to be made fairly quickly and easily. More importantly, however, drawing with paint will help you improve your drawing and painting skills at the same time.

Many artists routinely sketch or draw a scene beforehand to simply acquire a detailed visual understanding of it before beginning to paint. This can be done with a sketch or drawing pad, or as a preliminary study done in paint. Preliminary studies also enable the artist to identify problem areas that can be addressed early on. Pads of coated paper and canvas are ideal for quick, preliminary paint sketches or studies and are available from most art supply stores. Some artists simply tape pre-cut sheets of primed roll canvas to wooden panels or use gesso-primed illustration board for their oil sketches. Small "pochade" boxes specifically designed for sketching in paint are also now available from art stores. Sketchbooks, pencils, and other drawing tools, of course, are widely available.

Some artist's sketchbooks could be thought of as very personal visual journals that were recorded in a way that photographs could never capture. Sketches in any medium tend to display a pleasing freshness and spontaneity similar to "en plein air" paintings (see section on painting en plein air) and sketches and drawings often can stand by themselves as finished works of art. Once again, try sketching with paint for the full benefit of combined drawing and painting practice.

A detailed treatise on drawing is beyond the scope of this outline. There are, however, many excellent books available on the subject, often including beautiful and skillfully executed drawing examples in a variety of media that will surely whet your appetite for this fine, ancient craft. If you're new to drawing or are not satisfied with your drawing skills, I recommend starting with "Drawing on The Right Side of the Brain" by Betty Edwards. It's not only one of the best books about drawing for the novice, it also provides a unique insight into the way human creativity works, based on the latest science.

## The block-in

The block-in is the beginning of a painting. It's usually painted with a thinned mineral spirits or turpentine wash, but charcoal, chalk, pencil, and other similar materials can be used. Its purpose is usually to generally define, or "block-in" the important shapes that will be refined later on, as well to possibly establish values, but it can also be drawn with much detail. The block-in can be thought of as a foundation for the rest of the painting.

Some commonly used block-in styles are listed below for your consideration. They can be used individually or in combination, as appropriate for the artist.
(Try to use monochromatic value studies first until you're comfortable with identifying and painting correct values).

## Line Block-in

Sketched or painted with lines alone, the line block-in can be a few simple lines intended to establish the general location of a few features of a painting, or a detailed line drawing that defines every shape to be painted.

The detailed line drawing method is useful for artists who prefer to paint in a very detailed and realistic manner. This method creates an outline drawing not unlike a coloring book image that can then be filled in with paint. Usually pencils are used for this method because they impart a thinner line that represents detail better but charcoal, chalk, conte, or other drawing materials could be used.

The detailed line drawing method may affect the quality of your brushwork edges (see section on brushwork edges) because the line drawing itself encourages us to paint "up to the line" and no further. This tends to make the "seams" between passages generally sharper because they are blended less. If you prefer a variety of brushwork edges in your work and also prefer the detailed line drawing method of block-in, make a conscious effort to be aware of the additional blending of edges that may be required with this method.

Other artists prefer to start with a few sketchy lines that only locate important features. Paint thinned with solvent is commonly used for this. Artists using this method usually expect to refine the image as they go along, gradually bringing shapes, color, and value into some degree of focus.

## Line and mass Block-in

This method usually uses paint thinned with solvent to define important shapes with lines and washes.
This method could also be used to establish values. Artists using this method usually expect to refine the image as they go along, gradually bringing shapes, color, and value into some degree of focus

## Monochromatic (grisaille) value study Block-in

The monochromatic block-in called a "grisaille" could be thought of as a tonal drawing done in paint. Because it is intended to be the foundation for the final layers of paint that will be painted onto it later on, the block-in is usually painted with thin washes or thin layers of paint. Any color that can represent the full range of values in the painting can be used. Warm colors, however, especially the warm side of a complementary color scheme, if one is used, will lend a pleasing unifying effect to the final colors of the painting by contributing it's color to them.

Artists throughout history have used the grisaille as a preparation for finished works and also to create beautifully rendered monochromatic paintings that stand by themselves as finished works.

Try to use monochromatic block-ins first until you're comfortable with identifying and painting values correctly.

Because color values are easier to determine when they are compared to another color value that is already on the canvas, the monochromatic block-in is useful because all the values are accurately established with a single, monochromatic color early in the process.

Painting in monochrome removes color as a consideration for applying paint, and therefore makes establishing values a little easier. After the block-in is finished, all the artist has to do is find the right color, compare its value against what has already been established on the canvas, and replace the monochromatic color and value with it.

For more information about this useful block-in method, see section on "The Monochromatic (grisaille) Blockin As an Aid"
(This has been a technique for teaching painting for hundreds of years. Years ago, students were taught to paint an accurate value study in black and white and then, using the values of the study as a guide, completely paint over it with colors of the proper value).

## Several visualization and creative techniques to consider:

Artists throughout history have noted certain peculiarities of the visualization and creative process that seem to be common to all of us. Some of the time-honored techniques that artists have used for centuries to enhance their creativity and improve their performance may seem peculiar or unusual to you at first but do not underestimate their value.

Here are a few to consider:

## The art of looking away

Many professional artists understand that as they work, their ability to accurately see relationships between shapes, color and value will eventually fatigue. Because of this peculiar phenomenon, they take breaks often. Everyone is different, but you may find it helpful to take a short break every $1 / 2$ hour or so and then look at something other than your painting. As odd as this may seem to you, it's necessary to do this periodically to refresh that peculiar "fatigue" of the seeing process that we all experience. When you return, you may be surprised to find that some aspect of your work may need to be corrected that was not apparent before the break.

Don't underestimate the value of this. It's better to do whatever you can to correct problems early on rather than waste time reworking finished passages later on. This time-honored technique will help you find problems early, before they're sitting on top of thick paint.

## The art of squinting

When you look at a tree in summer, you see at least two things right away:
A "million" leaves, and
A "million" transitions of color and value

You shouldn't attempt to paint either of the two. Instead, simplify any passage of your painting, like the tree, that contains excessive detail. In fact, during the block-in stage, it's better to simplify everything into solid "masses" of color and value.

This can be done with another time honored, but somewhat peculiar method called "squinting". Squinting is exactly that. Look at the tree, for example, close your eyes slowly and you will eventually notice things getting fuzzy. With your eyes barely open, the individual leaves of the tree resolve into solid "masses" and the "million" transitions of color and value resolve into several. Just how it should look on our block-in.

Squinting, then, is an excellent technique to simplify anything that we're looking at, so we can represent it as simply as possible in the early (and sometimes later) stages of our painting.

## The mirror

Portrait artists have made use of the mirror to check the accuracy of their work for centuries, but it can be used for any type of painting to identify problems with drawing.

It's easy to use. Simply hold any size mirror that will include your entire painting in front of you, turn your back to the painting and reflect the image of the painting back to you. The mirror is particularly useful to show problems with symmetry or perspective that might not be otherwise apparent to the artist.

## Time and creativity

As you work on creative tasks like drawing or painting, you may occasionally notice that your sense of time fades or it may disappear entirely. When this happens, you may also sense yourself slipping into a kind of semi-meditative state where you don't have to think too much about the creative decisions necessary to complete the task at hand. This may sound unusual to you, but we now know from modern research that this effect arises when the mind surrenders the task to the specific area of the brain that is best suited for creative tasks. We also know that this specific area of thinking works best without constraints of time. Creativity simply doesn't like schedules, especially schedules that are hard to meet.

Because of this, try to give yourself more time than you think you will need for any creative task and you will be more likely to efficiently "zone in" to the task at hand.

Note: Art school figure drawing classes traditionally put severe time constraints on some drawing exercises that force you to think and draw quickly while at the same time forcing you to overcome your creative mind's aversion to schedules. They are two exercises in one. That uneasiness that you might first experience when you do the exercises may be your creative mind stubbornly resisting a schedule it doesn't like.

## "Getting something started"

Try to complete something that looks good to you before your painting or drawing session ends. Finished passages, or passages that simply "look good" to you often become the building blocks that the remaining work can be built on. They can also give you an incentive to continue working so you can see what the rest of the piece will look like when it's finished.

Sometimes a painting or drawing will "stall" and be discarded simply because it didn't seem to be "going anywhere". Try to select and complete an interesting passage as early as possible and you may find that it will lead the way.

## More notes about color

How important is color in painting? It's important, but it may not be as important as you think. Consider that when you look at a black and white photograph you still recognize the objects in the photograph even though their colors have been removed. Color, then, has little to do with our understanding of what things are.

Whatever color we use to represent things in our paintings, when a color doesn't "look right" it's usually because its either too light or too dark (its value isn't right) when compared to the colors around them, the color is too warm or too cool (its temperature isn't right) or the color mixture isn't right.

## Getting the value of colors right

## The toned ground as an aid

Color values are easier to determine when they are compared to another color value that is already on the canvas. Because of this, try preparing your canvas or panels with a toned ground.

A toned ground is a preliminary layer of paint that is colored, usually with any warm, middle value color, or sometimes with the specific colors of a color scheme. The middle value of the ground helps the artist to judge all the painting's values because there is already a middle value on the canvas to use as a guide for comparison.

A toned ground can be applied to the painting surface and allowed to thoroughly dry beforehand or it can be applied immediately before the block-in. Allowing the ground to thoroughly dry beforehand will allow you to paint aggressively without disturbing it. Applying the ground immediately before painting will allow you to use colors that may be more suited for a color scheme if you choose to use one. This is especially useful when painting on-site when the colors of a color scheme may not be apparent until you are actually there. Twenty minutes or so of drying time will allow the wet ground to set up enough to withstand normal brushstrokes.

The color of the ground also imparts a certain unifying effect to the subsequent layers of paint because it contributes some of its own color to them. It's not uncommon for artists to deliberately allow the ground to be exposed between brushstrokes or in larger areas to enhance this pleasing effect.

## Getting the lightest and darkest values right

Generally speaking, it's best to establish the very lightest and darkest values right away at the block-in stage and use them as a guide to establish the rest. This is especially true in situations where extreme light and dark value contrasts exist. The toned ground should make it easier to initially establish the lightest and darkest values.

It's usually best to initially paint your lightest values a little darker than they appear to you. This will give you more room to adjust them later without reaching the end of the value scale where they can't be lightened any further. It will also tend to force you to make the rest of your values a little darker, which will help make your final colors richer, more pleasing, and less "washed out" (see below)

For the same reason, it may be easier to initially paint your darks a little darker than they initially appear and plan to lighten them, if necessary, as the painting progresses.

Consider this approach:
As a general rule, start by painting your lightest and darkest values a little darker than they initially appear for the reasons noted above.

Once established, use those values to accurately establish the middle values adjacent to them. As more colors with accurate values accumulate around the lightest and darkest values, adjustments, if any, will become fewer and easier.

Once the middle values are accurately established, it should only take minor adjustments to bring the lightest and darkest values into final harmony with the rest.

## Creating an illusion of luminosity with value

Pigment doesn't "glow" with light. Artists can only create the illusion of light glowing from objects in a painting, sometimes called "luminosity". Creating the illusion of objects that appear to be actually illuminated or glowing with light can be challenging. Below are a few suggestions that may make it easier.

Successfully representing brilliantly illuminated objects, such as a white wall illuminated by the mid-day sun, often is a problem because our eyes tend to initially overcompensate and misjudge the lightest value of the brightest object that we observe. This is especially true when painting outdoors when the bright outdoor light itself tends to make things appear brighter than they are.

When we paint the lightest value too light and then use it to judge the values of surrounding areas, all the remaining values of our scene will tend to be painted either too light or without the value contrast that is required for our lightest values to appear luminous. Moreover, if we attempt to correct this problem later by painting our brightest object even lighter, we may reach the very end of the value scale where it cannot be lightened further, after which it may still not look "luminous".

The best way to avoid this problem is to do exactly the opposite of the above. You may be surprised that by lowering (darkening) the value of the objects that surround brightly illuminated objects our bright objects will appear brighter and more luminous. This is because the key to making bright objects appear luminous is to introduce strong value contrast between the bright object and its surroundings. The darker the values that surround a bright object are, the more luminous it will appear to be. Lowering all the values of paintings that contain brightly illuminated passages including the brightly illuminated objects will also ensure that your colors are rich and colorful. In fact, lowering the values of all of our paintings in general will also ensure that our final colors are richer and more colorful and make it easier to make any value adjustments necessary for our bright objects to look luminous.

An analogy to the lowered value technique above would be the effect that sunglasses have on the values of any scene that we observe. When we view a scene through sunglasses, all the values of the scene are reduced by the same degree. The degree of difference in value between the lightest and darkest values of our scene is the same because we have lowered all values equally. Because of this, our bright objects still look bright because the degree of value contrast has been preserved.

When we paint our scene then, if we lower all its values, including the value of our bright object, we can then easily raise the value of the bright object later on, if required, to further increase the contrast of value between the object and its surroundings. This will enable us to achieve the degree of value contrast and, therefore, the degree of luminosity that we want while at the same time preserving rich color.

Note: If determining the correct degree of value contrast is a stubborn problem for you, see the section on "The white card method of seeing value correctly".

Remember that "bright" doesn't necessarily imply "painted with white". Even white objects in bright sunlight will look more convincing if painted with a generous amount of the color of the light that illuminates them. Even at mid-day, for example, the sun contains much yellow. At early morning and late evening, the sun's color exhibits more yellow orange or even orange.

Similarly, artificial light will cast its own color onto its surroundings. Incandescent light, for example, will cast a strong yellow color onto the objects around it, especially white or light value objects. Painting your lightest objects, especially your white objects, with the color of the light that illuminates them will also make them look more luminous.

The more we lower the values of our painting, the more our lightest value objects will display the color of the light that illuminates them.

Similarly, certain reflections, such as in the eyes of a portrait or on a vase in a still life, will look more luminous if painted with rich color and lowered values as described above. Avoid painting these types of reflections with pure white.

Finally, objects that emit bright light, like streetlamps, often display a radiance that softens the edges of the object itself as well as objects adjacent to it. Painting the radiant "glow" of light emitting objects, along with the value contrasts noted above, may help to represent them more convincingly. Furthermore, this same "glow" can sometimes be seen when bright light reflects off the surface of other objects. In this case, the radiance of the light can sometimes be seen illuminating atmosphere around the object reflecting the light. Often, the objects edges are softened because of this effect.


Victorian Twilight oil on canvas
By lowering (darkening) the value of the objects that surround brightly illuminated objects our bright objects will appear brighter and more luminous. Artificial light will cast its own color onto its surroundings.
Incandescent light, for example, will cast a strong yellow color onto the objects around it, especially white or light value objects. Painting your lightest objects, especially your white objects, with the color of the light that illuminates them will also make them look more luminous. The "white" of the lamps above is actually a light value yellow. Avoid using pure white in your paintings.

## The color and value of white in nature

White does not exist, in its pure form, in nature. White objects will always exhibit some of the color of the light that illuminates them (see above), and sometimes color reflected from objects that surround them (this is true, to some degree, of everything in nature). Both will affect the value and color of our white object.

Determine the color of the illuminating source, look carefully for colors reflected from surrounding objects, and start with values that are lower (darker) than they appear, and the final values and color of your white or brightly lit objects will be easier to paint.

## Notes about black and your darkest colors

Black is the absence of all color that occurs when there is no light present. For the purpose of making our paintings black seldom exists in its pure form in nature because there is always some degree of light that surrounds us. It could also be said that wherever there is light there is color. Even our darkest darks, then, will have some degree of color if there is some degree of ambient light around them.

There are several black tube colors such as Mars Black, Ivory Black, Lamp Black and Payne's Gray that can be purchased from art stores, but it may be easier to mix your own. Mixing black from the pigments on your palette will simulate a black that can not only be customized to meet your needs but will also be more pleasing to look at because it is made from pure colors. For example, you could mix a black to accommodate a specific color scheme using the colors of the scheme if those colors were dark enough in value, or you could mix a black that could have its "warmness" or "coolness customized to meet your needs.

An example of this would be the combination of blue and orange on our palette. Mix a little orange into the blue (the blue on our palette, "phthalo blue" is already very dark in value) and you will have a nicely simulated black. Add a little more orange and your black will be "warmed" slightly. Add a little blue and it will be "cooled" slightly (see section on color temperature). The difference between the two "warm" and "cool" black mixtures often is the difference between whether it "looks right" on our painting or not. This black will look perfect in any "complementary" orange/blue color scheme (see section on "complements").

A nice neutral black (a black that will lighten with white to a familiar "gray" and can be mixed with any color without changing it to a different color) can be mixed from two other complements on our palette, viridian (green) and alizarin crimson (red). As with our blue/orange pair above, we can warm our mixture with red or cool it with green.

Another neutral black can be made from two other complements on our palette, manganese blue (blue green) and cadmium red deep (red orange) with the same neutral effect as our green/red pair above. This black will look perfect in any "complementary" red orange/blue-green color scheme (see section on "complements").

Finally, a general purpose, versatile black that can be adjusted with three colors from our palette can be made from Alizarin Crimson, Viridian and Pthalo Blue. Experiment with different mixtures of these three colors and note how many variations of "black" can be made from them.

Many of our recommended tube colors are very dark in value already, and most of our complementary pairs consist of at least one dark value tube color. Black can be made directly from these colors or from the darker value colors used for other color schemes. In fact, many of the dark values created on our "color charts" are visually black and could be used in paintings that use the colors that made them. Place them side by side and they could all be categorized not only as "black" but further categorized individually as "warm" or "cool", and by the visual hints of the colors that made them.

## The white card method of seeing value correctly

If seeing values accurately is a stubborn problem for you, try this:
Hold a large white card or paper in front of you and compare the value of the problem area against the white of the card (also try to illuminate the card with the light source).

Try this outside and compare the white of the card against "white" clouds and sky to see how much lower in value they really are relative to the white card and relative to how they appear. This may reinforce our "start with lower values" rule: often things are darker than they first appear.

## The monochromatic (grisaille) block-in as an aid

If painting correct color value is a stubborn problem for you, try using a monochromatic block in.
The monochromatic block-in, sometimes called a "grisaille" could be thought of as a tonal drawing done in paint. Because it is intended to be the foundation for the final layers of paint that will be painted later on, the block-in is usually painted with thin washes or thin layers of paint. Any color that can represent the full range of values in the painting can be used. Warm colors, however, especially the warm side of a complementary color scheme, if one is used, will lend a pleasing unifying effect to the final colors of the painting by contributing its color to them.

The rules for monochromatic color schemes can apply to the monochromatic block-in. That is, that they do not necessarily need to be painted with a single color but can be painted with any color on the color wheel, mixed with its complement and/or black and white (see section on the monochromatic block-in). They can also be painted strictly with a single color with washes of paint that use the color of the canvas as a light value, similar to a watercolor painting.

Artists throughout history have used the grisaille as a preparation for finished works and also to create beautifully rendered monochromatic paintings that stand by themselves as finished works.

Grisailles are fairly easy to create. It's easy, for example, to push paint around with thin washes until shapes and values are correct. Fine details can be lifted away with a brush loaded with solvent. Larger areas can be lightened or completely removed with a solvent-soaked rag or bristle brush. They can also be executed fairly quickly because shapes and values are established simultaneously, without color as a consideration.

After shapes and values are defined with monochromatic washes, often just a touch of local color to the final painting will quickly focus attention on the center(s) of interest while retaining the "loose" or "spontaneous" look of the painting's initial construction. Alternatively, the block-in can be generally or completely painted over with opaque paint and/ or glazes. Either approach allows the monochromatic underpainting to lend a unifying effect to the final colors of the painting.

Some artists deliberately leave selected areas of the underpainting (usually outside the center\{s\} of interest) visible because they consider this to be a pleasing visual effect. Leaving the underpainting partially visible also presents the viewer with an indication of how the painting was constructed, which some also consider to be visually pleasing.

Because color values are easier to determine when they are compared to another color value that is already on the canvas, the monochromatic block-in is useful because all the values are accurately pre-established with a single, monochromatic color before the painting starts. Painting in monochrome largely removes color as a consideration for applying paint, and therefore makes establishing values a little easier. After the blockin is finished, all the artist has to do is find the right color, compare its value against what has already been accurately established on the canvas, and replace the monochromatic color and value with it.
(This has been a technique for teaching painting for over one hundred years. Years ago, students were taught to paint an accurate value study (grisaille) in shades of gray and then, using the values of the study as a guide, completely paint over it with colors of the proper value).

## Getting Color Temperature Right

Temperature may be the most confusing aspect of color. It is that characteristic of color that gives it its "warm" or "cool" appearance when compared to the colors around it. Color temperature, along with a color's value, could be said to be the most common obstacles to mixing "correct" color. Often, only a slight change in a color's temperature or value is all that's needed to make a color "look right".

Understanding color temperature will be easier if you:

1. Acquire a sense of how specific colors can be used to "warm" or "cool" specific color mixtures and,
2. Acquire an understanding of the appearance of changes in color temperature by creating, studying, and working with certain color mixtures.

The sections below may help you with both.

## Understanding Color Temperature with Complementary Colors:

Acquiring an understanding of the appearance of changes in color temperature can be difficult because when a color mixture becomes "warmer" or "cooler" as we mix it, the resulting color may not necessarily look obviously "warmer" or "cooler" to the eye. Working with complementary colors, however, may help you to begin to understand and recognize the appearance of color temperature changes.

Changing the temperature of complementary colors is easy because when mixing complements, one color is pre-determined to be "warm" and one is pre-determined to be "cool".

In the yellow/violet complementary pair, for example, violet is the "cool" of the two, yellow is "warm".
Adding violet to any mixture of the two will "cool" the mixture and adding yellow to any mixture of the two will "warm" it.

The warm and cool sides of complementary pairs are:
Cool: Warm:
violet ------------- Yellow
yellow-green------ red-violet
green-------------- Red
blue-green--------- red orange
Blue---------------orange
blue violet----------yellow-orange

To fully understand the appearance of complementary mixtures as they are warmed or cooled, make a color chart for each color mixed gradually with its complement. Similar charts are shown in the section "Your Personal Color Charts".
To do this, create a blank chart as described in "Your Personal Color Charts" and simply place a pure color, such as yellow, in the upper left square. Add a small amount of the color's complement (in this case, violet)
to the yellow square at the top and lighten as in "Your Personal Color Charts". Progressively add more violet to the yellow in each top square until the yellow in the last top square (in the upper right corner) is fully saturated with the violet but is still visually yellow.

Study the colors that were created and note how the mixtures are progressively "cooled" as they move from left to right. Study the differences between the "warmer" (more yellow) and "cooler" (more violet) mixtures that you have made, and then create a similar chart for violet, the complement of yellow, and the rest of the colors on the color wheel mixed with their complements.

Remember that the addition of white to our color mixtures will also "cool" them. Study the appearance of each mixture in the chart that was lightened with white.

Note:
The complimentary color charts above, when made from the colors that are suggested in "Your Palette and the Color Wheel", will also make the full range of the complementary pairs on our suggested palette apparent to you. Many commonly used tube colors not on your palette can be made by directly mixing the complementary colors on your palette. For example, our orange complementary mixture chart will yield colors that are identical, or nearly identical to "raw umber", "burnt umber" and "burnt sienna". In addition, each complementary color chart will display the nearly full range of color and value (without the addition of black) of each monochromatic color scheme that can be created from the colors on the suggested palette.

## The "Warm" and "Cool" sides of the Color Wheel

The color wheel itself can be divided into two "warm" and "cool" halves. Any color on the "warm" side will be cooled when mixed with any color on the "cool" side, and vise-versa.

The warm and cool sides of the color wheel are the same as the warm and cool sides of our complementary pairs noted above. Once again, they are:

Cool: $\quad$ Warm:
violet --------------- Yellow
yellow-green------ red-violet
green-------------- Red
blue-green-------- red orange
Blue----------------orange
blue violet---------yellow-orange
Any color on the "cool" side of the color wheel mixed with any other color on the "warm" side of the color wheel will warm the mixture, and vice-versa.

Note:
Red, the warmest color on the color wheel, cannot be made any warmer. Mixing any other color on the color wheel with red will cool it.

Blue is the coolest color on the color wheel. Mixing any other color on the color wheel with blue will warm it.

## Color Temperature of Adjacent Colors on the Color Wheel

Colors other than complementary pairs and the warm and cool halves of the color wheel can also be used to warm or cool our color mixtures. On the circumference of the color wheel, for example, a color could be said to be "warmer" than another color on the color wheel when it is closer to red than the other color.

A color could be said to be "cooler" than another color on the color wheel when it is closer to blue than the other color. (Another way to describe this would be to say that the farther away from red on the color wheel, the cooler colors become and the farther away from blue, the warmer colors become).

For example (refer to the color wheel) orange, although already a "warm" color, is "cooler" than red-orange simply because orange is farther away from red on the color wheel than red-orange.

Green is "warmer" than blue-green on the color wheel because it is farther away from blue than blue-green.
It also should be noted again that adding white to any color or mixture will "cool" it.

Note:
Red, the warmest color on the color wheel, cannot be made any warmer. Mixing any other color on the color wheel with red will cool it.

Blue is the coolest color on the color wheel. Mixing any other color on the color wheel with blue will warm it.
Yellow, then, can be "cooled" in one of several ways:
By mixing it with its "cool" complement (violet)
By mixing it with a color or colors that are adjacent to it on the color wheel and are closer to blue than yellow.
By mixing it with any color that is on the "cool" side of the color wheel
By mixing it with white.
Violet, the complement of yellow, can be "warmed" in several ways:
By mixing it with its "warm" complement (yellow)
By mixing it with a color or colors that are adjacent to it on the color wheel and are closer to red than violet.
By mixing it with any color that is on the "warm" side of the color wheel.

The method you choose will likely depend on how the mixtures will affect the final color that you are looking for.

A practical understanding of color temperature, as well as the visual understanding acquired from using the colors noted above might help you to achieve an intuitive sense of what colors can be used to create the specific colors that you need. This intuitive sense of color mixtures should be your goal.

## Pre-preparing your white

Many paint pigments are dark in value. Because of this, after mixing our paint the value may be too dark and mixing it with any other color to lighten it may change the color to something that we don't want. The only way to lighten our mixtures to the proper value, then, would be to add white. White is also used to neutralize and/or cool some color mixtures. There's no way around it; you'll probably use a lot of white paint.

Because you'll probably use a lot of it, it's a good idea to have a good supply ready for use on your palette. Many artists reserve a larger area on their palette for white because of this. Also, if you find that your white is very thick out of the tube it's a good idea to thin it, so it will be creamier and easier to use when you need it. (Titanium and Flake white tend to be thick out of the tube while Zinc white tends to be a little "creamier"). Simply add a few drops of medium or solvent to the white and mix it for a minute or so until it's the consistency of soft butter before you use it.

## Several paint application techniques

Paint can be applied in many ways, in a wide range of thickness and consistency, and with a variety of tools. You can use one, several, or all the techniques at your disposal. Many artists try to include a variety of paint application techniques within a single painting to create a varied and interesting appearance. Here are several of the most common paint application techniques to choose from.

## Solvent washes

Solvent wash is a method of applying paint that is usually reserved for the first layers of paint at the block-in stage of the painting. It is usually intended as a foundation for thicker paint that will be applied as the painting progresses, but it may be used alone or as a predominating feature for entire paintings.

Paint is simply "watered down" to a thin wash with solvent and applied with either a brush or cloth. Unless blended before dry, turpentine washes will display the thinly applied brush strokes that they were applied with. Many artists consider this to be a pleasing effect when left undisturbed.

## Wet in wet

Arguably the most widely used technique for applying paint, wet in wet is a method of working wet paint into paint that is also wet. It's usually done with a brush or palette knife and is usually applied in fairly thick applications. The strokes of this technique tend to be smooth and more "painterly" (painted with prominent brush or knife strokes).

Although the initial brush stroke may blend to some degree with the paint under it, they are usually left as they are, rather than blending further.

Wet in wet paintings tend to look more "painterly" because the paint strokes are more clearly visible as opposed to carefully blended strokes that may look more like a photograph.

## Dry brush

Dry brush is applied by dragging wet paint, usually somewhat thick, lightly across dry paint, semi-dry paint, or dry canvas with a brush. The resulting brush stroke usually yields a random texture that sometimes conforms to the texture of the paint or canvas below it. It also can be applied over wet paint that is semi-dry or that has been thinly applied.

Although dry brush strokes are usually left as they are, they can be modified further with additional strokes from the palette knife or with brushes.

## Painting with a painting knife

Painting knives are indispensable for applying thick, clean paint to a painting. Their flexible metal blades carry more paint than most brushes and because palette knife strokes are generally quite thick when applied, they usually glide smoothly over the layers they are applied to without blending into them, even when painting wet in wet. They are also quite versatile. The following is a short list of suggestions for their use:

Dragging a loaded palette knife over dried paint will yield a look like the dry brush technique described above.

Painting knives can be used to scrape paint off the canvas to expose pleasing looking textures and patterns below.

Need to create a crisp, straight edge? Load the knife blade with paint and simply press it flat onto the canvas until the paint squishes out to the edge of the blade. Turn the blade edge up to define the painted edge that you want and lightly pull away from the edge leaving a perfectly straight painted edge.

Dabbing a dot of thick paint from a palette knife to indicate, for example, light reflecting onto a vase in a still life, may look better than the same from a brush because of the irregularity of the edges and the thickness of the paint that the knife produces.

The edge of a palette knife blade can be used to create very thin lines of thick paint. Just touch or scrape the edge into wet paint and then touch, or touch and drag the edge directly to the canvas.

Lift the knife straight up at the end of a flat stroke and create an interesting "stipple" texture.
Need to make a correction? Use the palette knife to scrape away areas that have become unworkable because the paint has become too thick, or as an "eraser" to make corrections.

Although palette knife strokes are usually left as they are, they can be modified further with additional strokes from the palette knife or with brushes.

Some artists work entirely with painting knives to create paintings that are rich in surface texture and color. Painting entirely with palette knives for a time tends to promote spontaneity and a "looser" painting style. You may want to do this for the same reasons, as well as to simply familiarize yourself with an excellent method of applying impasto to your paintings.

## Scraping:

Scraping away wet or semi-dry paint will create a variety of effects depending on the device that was used.
The edge of a palette knife could be used, for example, to smoothly scrape away large or small areas to reveal the texture and color beneath them. The smooth surface that remains may also provide a pleasing visual contrast to the thicker paint around it.

Any object that is hard or stiff enough to move the paint could be used to scrape it away. Even the handle of a brush could be used to scratch away thin lines where required. Artists have even been known to sign their
name by scraping it into wet paint.
Experiment with a variety of tools and study their effects. Be creative. Try, for example, the serrated edge of a plastic knife, or a stiff, worn bristle brush or even a toothbrush. Even a crumpled paper towel can be used to create interesting and unusual effects.

You could also experiment by scraping and then modifying the scraped areas with additional brush strokes or blending. Renoir is said to have incorporated scraping into his paintings by scraping away freshly painted passages and then refining the "ghost" of the image that was left behind. The result was a particularly rich and interesting final painted surface.

## Glazes:

Glazes are simply washes of paint mixed with medium that are applied thinly over paint that has thoroughly dried. A thin, semi-transparent glaze will allow the color of the paint under it to combine with the color of the glaze. The resulting color is often a unique and luminous color that may be difficult to recreate with opaque pigments.

Artists who paint primarily with glazes use their experience to build layers of often completely different colors to achieve their final colors and values. Acquiring expertise with glazes can be somewhat time-consuming because each experimental layer must dry before the next layer is applied and evaluated. Knowledge of color is often helpful to anticipate the final color after a glaze is applied, however. For example, a yellowish glaze over a blue foundation will yield a slightly greenish final color
similar to mixing the two colors directly with opaque pigments. The final color will depend on the intensity and value of the foundation color as well as the transparency and color of the glaze that is applied to it.

Many artists use glazes to simply refine color in localized areas of their paintings. They take advantage of the slight changes of color and value that is produced by the glaze to enhance or subdue passages as required.

Glazes, because of their thin, liquid consistency are usually best applied to a somewhat level surface. If you experiment with glazes, it may be best to begin by making slight modifications to color in need of slight value or slight changes of similar color rather than attempting to create new colors with glazed layers.

Glazes can also be used to enhance the appearance of the textured surfaces of your paintings. If you've painted with texture or impasto brushwork, a glaze of a neutral, middle value color applied to it will settle into the "valleys" of the paint and make the texture more prominent and visually interesting. Try applying a thick application of glaze followed by lightly wiping the surface with a clean rag. This will enhance the contrast between the glaze and the color of the paint surrounding it. Remember that glazes must be applied to dry paint to be effective and to avoid damaging the underlying layer of paint. Glazes over large areas should be stored flat until fully dry.

There are several commercially made mediums that are formulated specifically for glazes that are available from art supply stores. You can, however, easily make your own. Simply combine $1 / 3$-part turpentine with 1/3-part damar varnish and 1/3 part drying oil and mix well.

## Final Varnish

The surface sheen of an oil painting can become somewhat dull after the paint has dried. Depending on the paint and/or the medium that was used, the surface may also look patchy or uneven in luster, and colors may even appear slightly different in value when dry. To correct this problem, artists often use varnish to not only restore the richness of a painting's original colors as they appeared when wet, but also to protect their paintings against dirt and air-pollution, both of which can eventually cause discoloration of the paint. In addition, varnish provides some protection against minor surface damage, such as surface scratches, and
imparts a uniform sheen or gloss that some consider pleasing.

The degree of gloss (of the lack of it) on the surface of our final paintings is a matter of personal preference.

## Below are some notes and suggestions for final varnishing your paintings:

Final varnish is always applied after a painting has thoroughly dried. Most experts suggest that we allow at least six months of drying time for a painting of average paint thickness and longer for thicker paint applications before applying the final varnish.

Applying final varnish before paint is completely dry will risk surface cracking later on. For the same reason, avoid reworking a painting after the final varnish has been applied.

Note: "Retouch" varnish is different from "final" varnish because retouch varnish is greatly diluted with solvent so it can be safely applied to paint that has dried to the touch. Retouch varnish is usually used to temporarily restore the color of paint to an unfinished painting when the paint surface has partially dried and become dull. Temporarily restoring paint luster helps the artist to better match colors and values during subsequent painting sessions. Applying retouch varnish to wet paint may actually dissolve the underlying paint so it should be used sparingly and with caution.
Retouch varnish, however, is usually not used as a final protective coating for paintings.
Several types of varnishes can be purchased from art supply stores but the most commonly used may be "damar" varnish which is made from a natural resin that is harvested from damar fir trees in the far east. Damar varnishes are available in spray can form, as a bottled liquid that can be applied directly to the painting with a clean, dry brush, and in "gum" form that can be dissolved in turpentine prior to use (see below).

## A recipe for homemade gum damar varnish

Damar varnish can be purchased from some art supply stores in raw "gum" form that can be dissolved in gum turpentine before use. Homemade varnish made from gum damar is much more economical than the bottled or spray can versions and is easy to make. Below is a recipe for making your own:

Material required:
100 grams damar resin
300 milliliters turpentine (preferably "artist grade" refined turpentine)
Wrap the resin lumps in a white cotton cloth (tie with string) and soak in the gum turpentine (preferably "artist grade" refined turpentine) until resin is fully dissolved.

Spray varnishes are also available in gloss, semi-gloss, and matte finishes.
Always use varnish in a ventilated area and avoid breathing the mist and vapor created by spray applications.

You may find that spray varnishes may require more coats than brush applications from bottled varnish. This may be because spray versions are sometimes diluted with turpentine as well as isopropyl alcohol to improve the quality of the spray and prevent clogging and are, therefore, thinner when applied from the can.

Varnish should be applied in dry environments to avoid the milky "bloom" that occurs from applications that are applied in extreme humidity. In addition, for the same reason, avoid applying varnish in cold temperatures. Furthermore, ensure that the varnish itself has been warmed to room temperature when applied.

To varnish a finished painting that has completely dried, first gently remove any loose dust and dirt with a clean, soft, damp cloth. Allow any moisture from the damp cloth to dry before applying the varnish.

## For spray applications:

Ventilate the work area and protect yourself from inhaling spray particles.
Position the painting horizontally in an area as dust-free as possible. The painting should be left flat to dry.
Spray only enough varnish to lightly coat the painting's surface until the surface sheen is even. Avoid over spraying. Varnish that has pooled because of over spraying can be thinned with a brush or removed with a clean cloth before it "sets up" as it begins to dry. Allow the varnished surface to fully dry on a flat surface according to the drying time recommendations of the varnish manufacturer.

Repeat the process until the sheen of the fully dry surface is even and the degree of gloss is satisfactory.

## For brush applications from bottled varnish:

Ventilate the working area
Position the painting horizontally in an area as dust-free as possible. The painting should remain flat to dry.

Using a soft, clean, dry brush, apply only enough undiluted varnish to lightly coat the painting's surface until the surface sheen is even. Varnish that has pooled can be thinned with the brush or removed with a clean cloth before it "sets up" as it begins to dry.

After applying the varnish, clean your brush thoroughly with clean mineral spirits and then clean again with soap and water, followed by a thorough rinse in clean water to remove any residual resin that may stiffen (or ruin) your brush when dry.

Allow the varnished surface at least several hours to fully dry on a flat surface, Repeat if necessary until the sheen of the fully dry surface is even and the degree of gloss is satisfactory.

## Making progress with what you know:

## Learn from your mistakes:

Professional artists know that every painting can't be a success. Although we should always strive for perfection, the creative process by its nature will at times leave us with work that is far from perfect. Often we must experiment and fail before we realize improvement. New techniques and new approaches to our craft are seldom mastered immediately. At other times we may simply just have a bad day.

Whatever the reason for our less than perfect work, it's always best to use our "failures" to our advantage by learning from them as quickly as possible. Often a failure will represent a "sticking point" or hurdle that needs to be overcome before moving on to the next level of expertise. So try to enjoy this opportunity to learn and move forward.

In the same way that we should note our positive "accidents" for the purpose of building a repertoire of new techniques, we should also study our problem paintings to build a repertoire of what not to do.

Always try to locate and analyze a problem as soon as possible and avoid discarding problem work before determining what the problem is.

Often, simply putting the problem into words may be enough to make a correction right away and to do so, it may help to try to categorize the problem first. A few of the more common problems are listed below:

1. "drawing" (the shapes of things aren't right),
2. "color" (the color, value or temperature of the color isn't right)
3. "composition" (things seem to be arranged badly), or
4. "not enough planning ahead" (which affects all of the above)

Try to consider these categories first when analyzing problems.
Take the time to consciously identify a problem, correct it immediately if you can, make a plan to avoid it in the future, and then add it to your list of things not to do.

Several examples of concepts noted here in review


Centre Street Oil on linen
This scene is painted loosely on a brushwork textured canvas. The striking contrast between the brick building illuminated by the warm morning sun and the dark, run down area in shadow drew me to this scene.

Here are a few of the concepts noted in this treatise that are displayed in this painting:

1. The contrast of the blue sky and the orange of the brick building is a contrast of complementary colors. Complementary colors adjacent to or in the vicinity of the center of interest will tend to draw attention to them. In this case, the brick building is the primary center of interest.
2. The colors of the area in shadow are almost completely neutralized except for warm light reflected into the shadows of the face of the building. This is an example of contrast of color intensity between the neutralized shadow area and the purer colors surrounding it.
3. Note that the eye is quickly drawn to the extreme value contrasts at the left and right of the building in shadow. These value contrasts are adjacent to the brick building, the center of interest. Sharp contrasts of value adjacent to a center of interest will tend draw attention to it. These dark value contrasts also frame the area in shadow and, to me, are invitations to explore the dark, run down area in shadow before we escape into the more colorful, sunlit areas around it.

4. Note that the value of the building in the distance is reduced (lightened) to keep it from competing with the brick building, the center of interest, adjacent to it. Value contrasts can be strong in order to attract attention or weak to remove attention.
5. Note that the angled shadow at the right side of the building in shadow is sharp and dark where close to the ground and less so where higher and more exposed to the ambient light.
6. The angle of the shadows at lower right and the angle of the roof of the building in the distance is similar to the angle of the fire escape. This is an example of compositional "rhythm" which conveniently directs the eye upward and left toward the center of interest (coincidently as we would follow the path of the fire escape).
7. Another example of rhythm is the shape of the door in the shadow area and the corresponding duplicated shape of the window in the center of interest. When found, the eye will tend to move from the shadow area to the center of interest.
8. Although most of this painting was painted loosely with thick brushstrokes on a bed of texture, note the thicker brushwork in the shadow area which contrasts with the relatively thin brushwork outside the shadows. This especially contrasts with the finer lines of the fire escape.

The above painting demonstrates only a few of the concepts noted in this treatise. Clearly, not everyone would explore this painting exactly as I may have anticipated. We can only use the tools available to us to suggest to the viewer where the areas of the painting that interest us are. Consider that those tools enable us to actually communicate with the viewer.

A contrast of picture elements combined with compositional tools can, for example, quietly communicate to the viewer "look here" or "explore here". Try to use all the tools available to you to communicate what the painting means to you. Virtually every aspect of painting has a corresponding opposite that will create a contrast that can be used to either attract attention or diminish it.

Review the sections "Complementary Colors on The Color Wheel", "Focusing on The Subject: Contrast", "Impasto Brushwork as Texture" "Notes about Shadows" "Neutralizing complements" and "Notes About Composition: Rhythm" in this treatise for more details on the above concepts.

## "En plein air" versus studio painting:

## En plein air:

"En plein air", a French term meaning "in the open air", is a term commonly used to describe paintings that have been executed outdoors, rather than in the studio.
In the nineteenth century, the development of portable painting equipment and materials, such as the paint tubes that we use today, made it easier to transport painting materials directly to a painting location where a painting could either be started or worked on until its completion. Painting en plein air eventually became central to many of the French impressionist's painting styles and today many artists work either primarily or occasionally en plein air.
Paintings that are painted on-site usually display a pleasing freshness and spontaneity that may not be found in studio work where time and the working environment encourage a more "finished" painting style. The en plein air artist's struggle against time, the elements, and the painting process itself tends to promote a fresh, crisp, spontaneous painting style that usually does not display excessive or superficial detail. Painting on-site can be an exciting and rewarding experience that will improve your overall painting skills. Because of limitations of time and other factors like weather conditions, changing light, and other conditions beyond an artist's control, en plein air artists must focus on the essential elements of the painting quickly.

The result, with experience, is a sense of what the most important elements of a picture are, as well as a sense of what should be subdued, or not painted at all.

## Painting en plein air, however, can also be a frustrating experience if you're not prepared. Below are a few suggestions that may help make the experience more pleasing and rewarding:

Try to limit your first en plein air excursions to overcast days. On sunny days, "chasing" constantly moving and changing shadows as the sun moves overhead can be maddening until you're used to dealing with them.

If you must paint in bright sunlight, locate and paint your shadows right away and resist the temptation to adjust them as they change.

You may find that shadows tend to change less dramatically when the scene that you are painting is illuminated from sun that is directly behind you.

Try to limit your first en plein air sessions to areas where noise, crowds and traffic are less likely to be distractions.

If you're not sure what scene you will be painting beforehand, be prepared to commit yourself to the first scene that looks good to you at the site to avoid spending precious time trying to find something "better".

## Try to divide the painting process into logical steps and give yourself more time than you think you will need to complete each step. For example, you might:

1. Plan a certain amount of time to simply study the scene and compose your painting.
2. Set aside a generous amount of time to establish shapes and complete the block-in, and finally
3. Resolve the center(s) of interest with a final refinement of value and color.

With more time than you need, you will always be "ahead" and have the psychological advantage necessary to keep the time constraints that typically accompany en plein air painting from affecting the quality of your work.

Do not underestimate the time it takes to plan. Take a full ten minutes to study the scene before composing it. Locate a center of interest and then, if possible, try to imagine the completed painting before you start and plan your painting session based on that image. Paintings often "go in the wrong direction" or "don't go anywhere", because there was no planned direction early in the process.

One of the best exercises of en plein air painting is to quickly locate a center of interest or subject, and focus on it. Try to do this right away and then bring your entire repertoire of painting knowledge and techniques to bear to call attention to it.

A viewfinder always helps to quickly compose your painting, thus saving time.
Work with a canvas size that's manageable for your painting style and for the time that's allotted for your painting. Avoid very large canvases (sometimes called "sails" by those of us who have lost them to the wind).

Avoid painting with the sun directly illuminating your canvas or palette. Painting in glaring sunlight is not only a cause of fatigue, it can also adversely affect your ability to judge and paint correct values.
Try to find shade or position your canvas in a way that avoids direct sunlight. Some artists use a white, light diffusing umbrella to reduce glare and diffuse the sunlight, so it will not affect the color of their paint mixtures (the shade of summer vegetation, for example, may impart a green cast into your painting and paint mixtures, and affect them accordingly. A white umbrella will tend to diffuse the more neutral sunlight onto your painting and palette and have less of an effect on them).

Remember that bright outdoor light may adversely affect your ability to judge values accurately because things may appear to be lighter than they are. A common problem with this effect is to initially judge and paint your lightest values too light which may cause the rest of your values to be painted too light or cause your lightest values to reach the end of the value scale where they cannot be lightened any further.

Until you're used to judging values in the bright light of open air, try comparing the values of your scene against a white sheet of illustration board or paper that is also illuminated by the same light source as the scene. You may find that often the overall values of your scene are not as light as they initially appear.

As a general rule, try to paint your values, especially your lightest values, a little darker than they appear and plan to adjust them, if necessary, later on.

Extreme temperatures, the sun, insects, and the weather are common causes of abandoning a site prematurely so plan accordingly and protect yourself against them.

An "anchor" made from a rope tied to the underside of your easel and attached to anything heavy, is always
good protection against gusts of wind (overturned easels could be added to our list of reasons for abandoning a site, above).

A checklist is always useful to ensure that critical items are not left behind.
Winter temperatures may thicken your paint and make it difficult to work with. Try mixing solvent or even alcohol with paint that is too thick to bring it back to its original consistency rather than linseed oil or other mediums.

Try to limit your painting sessions to no more than four or five hours and take breaks often to avoid fatigue.
Enjoy your place in the time honored tradition of en plein air painting.

## Studio painting:

Many artists prefer the comfort and convenience of an indoor environment to the unpredictability of en plein air painting. Studio painting, unlike en plein air painting, allows the artist to control every aspect of the painting environment. Lighting, temperature, availability of supplies, and the time that is available for painting can be completely controlled by the artist. Because of this, the studio environment accommodates a wide range of painting styles from quickly executed sketches to lengthy and meticulous studies. Moreover, certain kinds of painting, like portraiture and still life, are easier to execute in the studio where lighting can be fixed, and multiple sessions are possible.

For centuries artists have used indoor environments to develop and complete their work, often bringing preliminary sketches made elsewhere back to the studio where they can be refined further and incorporated into finished works. Many artists today continue to work this way in the privacy and convenience of their own personal working space. Modern digital photography also now allows our subjects to be quickly captured and conveniently brought back to the studio. Within minutes the image can be printed for the artist's reference, saving time, and eliminating the need to be concerned about changing light, weather, and other factors beyond his/her control. Some artists, however, believe that excessive, literal use and reliance on photographs may tend to restrict an artist's painting style or hinder his/her progress. Furthermore, because time is not necessarily a factor in studio work, the environment itself may tend to promote a more "finished" or restrained painting style. This is because in the studio it's easier to refine passages that may be otherwise left alone in the plein air environment, where time is limited.

If you tend to work with a slow and meticulous painting style, studio painting may be your best choice as a primary method of working. If a "loose" or "spontaneous" (more expressive and unrestrained) looking painting style is important to you, make a conscious effort to pre-plan your paintings to incorporate those features and effects in the studio and resist the temptation to refine them further. Working with either style of painting is a matter of personal choice and preference.

To encourage a looser painting style while taking advantage of the best of both environments, some artists begin painting en plein air and then bring their paintings to completion later in the studio. This method allows the artist to incorporate the more expressive appearance that en plein air painting typically imparts, while also allowing for some refinement, as necessary, later in the studio. In addition, the time that passes between painting sessions may allow the "seeing" process (see section "The Art of Looking Away", above) to be refreshed, thus permitting a fresh evaluation of the painting later in the studio while the painting site is still clear in the artist's mind.

## Planning Your Working (studio) Space

An artist's working (studio) space should be a deeply personal and unique working area where creativity is allowed to flourish, undistracted. Below are some recommendations for planning studio space, for your consideration:

Avoid common incandescent light bulbs for studio lighting. Common incandescent bulbs may cast a yellow
color onto your canvas and palette and affect your color mixtures accordingly. Try using "color corrected" bulbs that are more neutral in color. Use one or more to illuminate your canvas and one or more to separately illuminate your palette.

Position your lighting to avoid shadows and glare as you paint and as you mix your colors.
North light is best for natural light illumination during the day because it tends to be consistent, is neutral in color, and does not cast moving shadows. If you're lucky to have large windows facing north in your studio use them. Some artists also use thin curtains or even translucent paper to further deflect or modify the intensity of the window light at certain times of day or to enhance the lighting for certain painting subjects like portraits.

Try to allow yourself enough space to step back from your canvas to periodically evaluate your work from a distance.

Try to find space that is reasonably spacious, quiet, and free of distraction because they are the best places for creative thought. Moreover, try to find space that is dedicated to no other tasks but painting and creative thinking. Your working area should be a place where you are comfortable, relaxed, and where you look forward to and enjoy painting.

If space allows, a separate workbench may be useful for other things that you may need to do like preparing canvas and panels, cutting paper or mat boards, varnishing finished paintings, or even cleaning brushes.

A utility sink close by is useful for cleaning up after painting sessions.
Don't forget to include your favorite music when you paint. Music that's pleasing to you and also accompanies the creative process can contribute to it in a positive way.

Plan your storage areas to keep your working area open and unrestricted. Remember that certain solvents, like turpentine, are flammable. Turpentine or oil-soaked rags and paper towels may combust automatically in enclosed containers, so plan the storage and disposal of solvents, used rags, and used paper towels accordingly.

Make sure your wet paintings can be stored safely until fully dry. Canvas and panels should be stored in a manner that keeps them separate from each other and allows air to circulate around them. Several versions of canvas storage units are sold from some art supply stores, but simple vertical "slots" can be improvised from plywood. Avoid stacking freshly prepared or freshly painted panels and canvas together even if they are dry to the touch.

Avoid enclosed areas that have little or no ventilation. Good ventilation is necessary even if you use "odorless" solvents.

Decorate. The best decoration for your studio, in my opinion, is your best work. Surround yourself with your best images, the images of work from your favorite artists, or the images that inspire you. Display your drawings and preliminary sketches as well. Anything that says something about you as a person or as an artist or that inspires you to paint is appropriate.

Remember that the best "studio" space may be any place that is personal and comfortable to you. You don't need extravagant surroundings to make good art.

## Notes on oil painting materials for students:

## Support materials for oil painting

Art students today can take advantage of a wide variety of painting surfaces, from traditional canvas and panel supports to coated paper and illustration boards. The following is a summary of most that are available.

## Canvas Panels

Possibly the most convenient and popular painting support for students, canvas panels are available from art supply stores in standard frame sizes ( $8 \times 10,11 \times 14,12 \times 16,16 \times 20$, and larger). They are made from canvas, which is glued to cardboard and covered with gesso.

We recommend that you apply at least one additional coat of oil paint "ground" to the surface of canvas panels before painting on them because the highly absorbent gesso surface by itself may make the initial application of paint somewhat difficult to apply. The ground layer of paint should be allowed to fully dry (at least one week) before painting.

Canvas panels are easy to store and come in sizes that will fit into the storage areas in standard paint boxes.

Note: Remember that old panels can be recycled for new school projects. Just refresh the surface with a clean layer of paint and let it dry, or paint directly over them. After several projects you may notice a build-up of paint strokes that may actually be pleasing to look at.

## Pre-stretched canvas

Slightly more expensive than canvas panels, student grade "cotton duck" pre-stretched canvas is also available from art supply stores in standard frame sizes. Stretched canvas is canvas that is stretched tightly across a wooden frame and secured with staples.

As with canvas panels, apply at least one additional coat of oil paint "ground" to the surface of canvas panels before painting on them because the highly absorbent gesso surface by itself may make the initial application of paint somewhat difficult to apply. The ground layer of paint should be allowed to fully dry (at least a week) before painting.

Some artists prefer a stretched canvas rather than a hard panel because of the "give" or slight bounce that the canvas yields when brushed. Stretched canvases are sometimes supplied with wooden or plastic wedges that can be used to tighten a loose canvas. By inserting the wedges into slots at the corners of the frame and tapping them with a hammer, the frame
will expand and tighten the canvas.
Note: Remember that old canvases can be recycled for new school projects. Just refresh the surface with a clean layer of paint and let it dry, or paint directly over them. After several projects you may notice a build-up of paint strokes that may actually be pleasing to look at.

## Masonite panels

A somewhat new addition to art supply stores, Masonite panels are made of wood fibers pressed into a panel. They are also sold in standard frame sizes and usually are sold with a gesso coating.

Fairly inexpensive uncut Masonite panels can also be purchased in standard 4 ft by 8 ft sheets at most lumber or building supply stores. For a small fee, most lumberyards or building supply stores will cut the sheet to smaller sizes. We have several patterns of standard frame sizes that we use for this purpose, which yield, on average, about 25 panels. The cost of individual panels using this method is comparable to canvas panels (less than $\$ 2.00$ per panel regardless of size) and the panels are more durable
and therefore more reusable. They are also easy to store and transport. Avoid the premium (and more expensive) "tempered" grade of Masonite. The oil content in it may affect the longevity of your more permanent work.

Preparing the raw cut panels, however, requires that you sand each before applying a gesso or flake white ground.
(Use proper ventilation and a dust mask when sanding raw Masonite or painted surfaces).
Note: Remember that old Masonite panels can be recycled for new school projects. Just sand them down or refresh the surface with a clean layer of paint and let it dry, or paint directly over them. After several projects you may notice a build-up of paint strokes that may actually be pleasing to look at. (Use proper ventilation and a dust mask when sanding raw Masonite or
painted surfaces).

## Paper and illustration board

You can paint on any paper or illustration board that is properly prepared with a suitable size or ground (gesso is usually used). Cotton paper, such as Archers 140 lb can be used without a gesso preparation.

Generally speaking though, paper should be reserved for sketches or very preliminary work that is not intended to be permanent. Except for the cotton paper noted above, never paint directly on paper that is not prepared with gesso or some other protective coating.

If you use paper, make sure it's heavy enough to withstand the preparation and painting process and make sure it's "archive quality", or "acid free". It should be smoothed flat and taped to a firm, flat surface such as Masonite while the gesso is applied and while it's being painted on. If taped tightly, the buckling caused by the initial wet gesso application should flatten as the paper dries. If some buckling remains after the first coat, remove when dry to the touch and press the paper, under a weight, between two Masonite or other flat panels until completely dry. Use at least two gesso applications, lightly sanding between coats when dry.

Coated canvas-textured paper is also available from art supply stores in pad form.
Illustration board should be prepared in the same way as paper, with the same precautions. Illustration board is slightly more durable than paper and can be made slightly even more so if covered on both sides with gesso.

Any of the "Bainbridge" type boards are excellent for student work. Our preference is Bainbridge Number 80 because it has a slight texture that receives the gesso and subsequent paint layers well. Bainbridge boards are very cost effective for student work, sketches, and preparatory studies. They are sold in several sizes that can be cut to standard frame sizes with
any exacto, or utility knife.

## Canvas pads

Pads of gesso covered canvas, similar to pads of paper, are available from art supply stores. You can secure the pad to an easel as you would a canvas panel or tape the individual sheets to a wooden or Masonite board for painting. Canvas pads are useful for quick and convenient studies and sketches and are a cost effective alternative to canvas panels for student
work.

## Roll canvas stretched by the artist

You can buy canvas by the roll, or purchase it cut from the roll and sold by the foot, at most art supply stores. One-yard cut from the roll will yield a section three-foot-wide (one yard), by six feet long (the length of a typical roll may vary).

Some roll canvas is pre-treated with a glue or gesso ground. Roll canvas is also sometimes sold with ground and an oil paint primer. Pre-treated gesso covered canvas cut from the roll is an inexpensive and excellent quality painting support for students as well as professionals. It can be cut to size and taped temporarily to a
wood or Masonite panel without further preparation for painting. If you use it this way, try to cut the canvas to standard frame sizes plus at least two inches extra on each side if you plan to later stretch the canvas onto stretchers. It can also be glued to wood or Masonite panels or stretched onto stretchers beforehand. Dry paintings without stretchers can be stored flat or loosely rolled. If you stretch the canvas onto wooden stretchers first, it will allow your paintings to be transported and stored easier when wet and will allow the painting to be framed without further work.

Stretching canvas is fairly easy but requires some additional materials such as the wooden stretchers themselves (four per canvas), carpet tacks and hammer or a staple gun, a carpenter's square, and possibly gesso or flake white to prepare the "ground" if the canvas hasn't been prepared with them already. Specially designed wide jaw pliers for stretching canvas are also available from most artist supply stores.

## Brushes

Good quality brushes will last longer, and therefore will be less expensive for you in the long run. How long they last will depend on how well you care for them.

## Here are a few tips for their care:

## Care of brushes

Never allow paint to dry on a brush's bristles. Clean your brushes with solvent immediately after you've finished painting.

Try to keep paint from drying inside the ferrule, the shiny metal sheath that holds the bristles to the handle.
Paint that dries and accumulates inside the ferrule will eventually cause bristles to spread apart.
There are many styles of brush cleaners to choose from. A simple coil brush cleaner, for example, is effective and relatively inexpensive. This type of brush cleaner is usually a capped glass jar with a large coil inside. The jar is filled with solvent and the coil, which is raised a few inches from the bottom, allows you to gently work the paint from the bristles by brushing them across the coil. Paint sediment will eventually fall to the bottom of the jar and leave the coil in clean solvent for your next cleaning.
Many artists use simple homemade brush cleaners made from glass jars or tin cans. If you intend to travel with homemade brush cleaners, make sure they can be capped without leaking.

A second container with clean solvent for a final rinse is useful. A simple glass jar or coffee can may be all you need for this.

Change your brush cleaning solvent often.
Ideally, brushes should be cleaned with clean solvent and then gently cleaned again with soap followed by a thorough rinsing.
A second rinse or cleaning is especially important for sables. A second cleaning with soap will remove any resins from the cleaning solvent that may cause your brushes to become stiff when dry, even though they may look clean. It will also clean any residual paint that may have been mixed with the cleaning solvent. Special brush cleaning soaps are available from art supply stores.

After cleaning, and while soaking wet, touch the end of the brush to a paper towel or clean rag. This will pull the remaining liquid from the bristles, pull them together and help them retain their shape. Twisting your sables counterclockwise when you do this will form them back to a perfect point.

Flat sables and bristles can be drawn to a sharp edge by touching them, while soaking wet, to a clean rag or paper towel and allowing them to dry. They can also be gently clamped between a folded piece of thin cardboard with a wide "binder" style paper clip while they dry to maintain a sharp, straight, "chiseled" edge.

Remember, flat brushes of all styles are actually two brushes in one: The flat width can be used for wide strokes and washes, and the thin edge can be used for thin lines and "drawing". Always try to maintain a closed "chiseled" edge on your flats as described above.

Store your brushes in a manner that will not disturb or deform the bristles.

Always protect the bristles of your brushes when storing and transporting them. A simple homemade quiver made from paper tightly wrapped around the bristle end of a group of brushes and secured with an elastic band may be
sufficient, or several styles of brush quivers are available from art stores. In the studio, any jar, vase, or other container of suitable size can be used. Store your brushes with bristles facing up if you store them this way.

You can recycle dirty solvent by storing it in a separate container until the old paint has settled to the bottom. When the solvent is clear again, it can be poured off into a clean container and reused.

Always dispose of dirty solvent and paint sediment as you would any toxic or environmentally unfriendly substance.

## Palette and painting knives

A palette knife is a small metal spatula used to mix paint on a palette. It's also used for cleaning paint from the palette. Palette knives are usually fairly narrow with blades of varying lengths, usually between two and three inches, and usually have wooden handles. Painting knives are similar to palette knives and are often called palette knives by artists. They are usually triangular in shape, however, may be wider than palette knives, and come in a wider range of sizes. Painting knives are used for applying paint directly to the painting as an option (or replacement) for the brush. They can also double as palette knives if necessary. The flexible metal blade of painting knives can often hold more paint than brushes and allow larger amounts of paint to be applied to large as well as small areas of the canvas. Palette knives generally impart a smooth surface to the paint that can be pleasing to the eye and offer some variation from the appearance of brush strokes. Never allow paint to dry on a painting knife's blade. Try to use a 2 -inch-long by $3 / 4$ inch wide (or any similar size) painting knife which can double as a palette knife and allow you to experiment with the palette knife as a painting tool.

## Some notes about shopping for supplies

As a general rule for student work, try to purchase inexpensive materials except for brushes. Good quality brushes, if properly cared for, will last longer than inferior brushes and save you money in the long run.

If you're planning for art school, expect that your painting instructors may dictate what specific supplies they'll want you to work with. Instructors may recommend different tube colors from the one's recommended in this outline, for example. They may also require you to work on a specific size, or a minimum size of canvas or panel, or they may not. Generally speaking, "introductory" or "beginner" level courses will require more specific materials, like tube colors, than the 'intermediate" or higher level courses.

It's probably best then, not to "stock up" on tube colors, canvas, or panels until you understand what the instructors' preferences are, if any.

Art school painting classes will probably have easels available to you. If so, a simple box to carry your brushes, paint, medium and even canvas panels (if they're approved) may be all you need. If possible, however, a good portable "Julian" style easel will provide you with an excellent portable storage and painting platform that can be easily set-up for use at class, at home, or outdoors.

There's no getting around it: you'll need a lot of "stuff" for painting regardless of the medium you work with. Many artists improvise methods of transporting his/her "stuff". A common luggage rack with wheels works well. Versions of these, specifically designed for transporting art supplies, are sometimes available from art stores. Strap your collapsed Julian easel onto it with paper towels, extra canvases, and whatever else you need and just pull it into class.

## Additional materials:

## Solvents and medium

Turpentine, mineral spirits, or turpentine substitute for oil paintings
Painting medium(s)

## Miscellaneous supplies

## Brush Cleaner

Cups (individual) for medium
Pliers (better than teeth for opening stubborn tube caps)
Maul (a metal or wooden stick used to steady your hand when necessary
Paper towels
Gesso (if you chose to prepare your own canvases)
Paint box with palette
Medium sandpaper (if you choose to prepare your own canvases)
Small jars with leak proof caps for medium and solvent

## Optional:

Quiver (to protect your brushes while travelling)
Metal tube "squeezer" (to get the most out of each tube of paint)
Luggage cart for transporting all of the above.
If you chose to stretch your own canvases:
Canvas stretchers, various sizes
Stretching pliers and staple gun
Carpenter's square

## Glossary:

Block-in: The block-in is the beginning of a painting. It's usually painted with a thinned turpentine wash, but charcoal chalk and pencil, and other similar materials can be used. Its purpose is usually to generally define, or "block-in" the important shapes that will be refined later on, as well to possibly establish values, but it can also be drawn with much detail. The block-in can be thought of as a foundation for the rest of the painting.

Canvas: A woven cloth, one of the most common materials used by oil painters as a surface to paint on. Technically, canvas is made only of cotton. It comes in a variety of "weights" from "thin" to "heavy" that are determined by how much cotton was used to make it.

Thin, pre-stretched "cotton duck" canvas, and canvas mounted to cardboard, are fairly inexpensive and are commonly used by students.

Linen is the highest quality and although it's not made of cotton, some artists still refer to it as "canvas". Linen is made from the flax plant, the same plant that the linseed oil in oil paint comes from. It can be manufactured in very fine to very coarse textures, lasts longer than cotton canvas, and therefore is more expensive and not used for student work.

## Color schemes:

Color schemes are colors that are selected for a painting because of their position on the color wheel.
A single color, complementary colors, or colors that are adjacent to each other on the color wheel and used with their complement, can be used to make paintings with color schemes.

Some common color schemes are:

Monochromatic: A single color modified with white or black or its complement.
Complementary: Any two colors that are directly opposite each other on the color wheel.
Split-complementary: Any three colors adjacent to each other on the color wheel, usually modified by the complement of the color in the middle.

Triadic: Any three colors, equally spaced on the color wheel

## Color Wheel:

A circle of individual colors, arranged as shown below:


The color wheel

Colors opposite each other on the wheel are called complementary colors. A single color, complementary colors, or colors that are adjacent to each other on the color wheel used with a complement, can be used to make paintings of related colors called color schemes.

## Complementary colors:

Two colors that are opposite on the color wheel. Mixing two complements neutralizes each (makes their color less intense) without the "muddying" effect that mixing with non-complements may have.

Gradually mixing two true complements will eventually yield a neutral color that does not display either of the two, sometimes called a "gray". As with the "positive" and "negative" polarity of magnetism, complementary colors are actually opposite sides of the same color and therefore are considered to be harmonious when used together. Complementary color mixtures could be said to be purer and more pleasing in appearance than non-complementary mixtures.


A method of applying paint where wet paint, usually somewhat thick, is lightly dragged with a brush across dry paint or canvas. The resulting brush stroke usually yields a random texture that sometimes conforms to the texture of the paint or canvas below it.

## Dominant color:

In color schemes, a dominant color (sometimes referred to as predominant color) is one that is visually displayed more than any other color. In complementary color schemes, for example, one complementary color is usually more visible than the other (dominant) while the other is subdued (subordinate).

## Edges:

The edges of brush strokes. Brush stroke edges are generally referred to as "hard" (sharp and well defined), and "soft" (fuzzy or blurred and not well defined)

The appearance of brush stroke edges can be modified in appearance by:
Blending (soft edges) or refraining from blending (hard edges).

Mixing and applying intermediate colors instead of blending.

Applying intermediate colors and blending them.

Strong, hard edges tend to attract the eye, softer edges put things slightly "out of focus" and therefore the eye will tend not to rest on them for long. The use of hard and soft edges throughout a painting is sometimes called ""lost and found". It is a technique that can call attention to, or away from objects or areas within a painting, as well as simply impart a pleasing effect.

## "Fat over lean" rule:

"Fat" and "Lean" refer to the amount of oil in paint when it’s applied to the painting surface. "Fat" indicates more oil and "lean" indicates less. Paintings are usually constructed with layers of paint, one on top of the other. The "Fat over lean" rule simply says that each new layer of paint should have as much or more oil content as the layer under it.

Artists are concerned about this because excessive "lean" (less oil) over "fat" (more oil) layers may cause
cracking later on as the painting dries or ages.
You should always be aware of this rule, but if you paint with a consistent, sound approach you shouldn't have to be concerned about it.

Try to start with a "lean" "block-in" of paint thinned with turpentine (which is easier to work, and rework early in the process anyway). Then follow the block-in with (fatter) paint straight from the tube to refine the image, and then, if necessary, finish with a final layer mixed slightly with medium.

As you become more proficient, you may find that won't need a lot more layers than these to get the job done anyway.

## Gesso:

Years ago, gesso was made from a mixture of Gypsum and glue that was used to protect the fibers of canvas or paper from the oxidizing effect of direct contact with linseed oil in oil paint. Today, Gesso is generally known as a white acrylic mixture sold in most artist supply stores and is used for the same reason: to protect canvas and paper from the damaging effects of direct contact with oil paint. It also has a high degree of elasticity when dry which tends to prevent cracking of the layers of paint applied to it. Gesso can be applied with a common house painting brush directly to the painting support, usually in several layers, and sanded between layers when dry.

Most canvas and panel support from art supply stores are pre-prepared with gesso. Gesso will need to be purchased separately if you prepare your own panels or canvas.

Ground: A layer of paint or gesso applied as a preparation for subsequent layers of paint. The ground is simply a foundation layer and is not part of the painted picture itself. A ground of paint may be either textured or colored (see also toned ground) and may be applied directly to wood or Masonite, or over gesso or glue on canvas, illustration board or paper.

Impasto: Any thick application of paint. Impasto greater than $1 / 8$ inch thick is generally considered to be unstable and may crack. Artists who enjoy painting with very thick impasto should consider painting on hard wood or Masonite panels to reduce the possibility of cracking.

Intensity: The brightness or dullness of a color. The intensity of the pure color red, for example is at its highest, it cannot be made any more "red".

When speaking of paint pigment, the red can be made to be less intense without changing the color by:
Mixing it with its complement, in this case, green
Mixing it with white
Mixing it with black or gray
Making a color less intense by mixing it as shown above is called "neutralizing" the color.
Neutralizing a color lowers its intensity and removes its "brightness" but the color is still the same color. Mixing the color with colors other than those noted above will change the color to something else.

## Luminous:

The illusion that light is actually coming out of or illuminating objects in a painting.

## Medium:

A vehicle or solvent used to dilute paint to a more desirable consistency for painting. For oil painting, linseed oil mixed with dry pigment is what gives oil paint it's creamy or paste-like consistency out of the tube. If an artist needs to thin the paint further, he/she can thin it with solvent, linseed oil, or a mixture of both, sometimes mixed with varnish. Turpentine, turpentine substitutes (terpenoid), linseed oil, varnish, and premixed versions of the three are sold at most art stores. Medium should be used with the "fat over lean" rule in mind.

## Neutralize:

When referring to complementary colors, the effect of reducing a complementary color's intensity when two complements are mixed together.

White and black will also reduce any colors intensity when mixed with the color.

## Palette:

A surface used to mix paint. Palettes can be of any convenient size and shape. The most common are made of wood with a hole sometimes located at a corner for the artist's thumb. This allows the palette to be carried away from the painting while allowing paint mixing at the same time. Pads of disposable wax paper palettes are convenient and are popular with students. Simple glass sheets are useful for indoor work and are easy to scrape clean. Most portable "Julian" style easels come equipped with a wooden palette custom designed to be safely stored for travel when the easel is closed.

Sometimes artists refer to their personal selection of colors used for painting, or the colors selected for a single painting, as their "palette" of colors.

## Palette knife:

A small metal spatula used to mix paint on a palette. Knives used to apply paint to the painting are called "painting knives" but are sometimes referred to as palette knives.

## Predominant color:

See dominant color

## Quiver:

A carrying case for brushes designed to protect their bristles from damage while being stored or transported. Sometimes they can be rolled tightly and tied for easier storage.

## Size:

In oil painting, size usually refers to a special (rabbit skin) glue that is used to protect the fibers of canvas painting surfaces from the oxidizing effects of the linseed oil in oil paint. Often Gesso is used in place of the glue.

## Solvent wash:

A method of applying paint that is usually reserved for the first layers of paint at the block-in stage of the painting. It is, therefore, usually intended as a foundation for thicker paint that will applied as the painting progresses, but it has been known to be used alone or as a predominating feature for entire paintings. Paint is simply "watered down" to a thin wash with turpentine or thinning spirits and applied with either a brush or rag. Unless blended before dry, turpentine washes will display the thinly applied brush strokes as they were applied, which many artists consider to be a pleasing effect when left undisturbed.

Solvent washes should not be used over thicker paint to adhere to the "fat over lean" rule.

## Stipple:

A paint texture that is created by pressing the end of a brush straight into wet paint and pulling it away, leaving small "points" in the paint where the bristles of the brush have pulled the paint away. A stipple effect can also be achieved by pressing the flat blade of a palette knife into paint and pulling it away, as with the brush.

Stippled texture is one of several textures that can be applied to the paint as it is applied, or as part of the painting ground before the painting is started. Stipple, as with other textures, imparts an interesting, varied, and pleasing appearance to the final layers of paint.

## Stretcher:

Specially made sections of a wooden frame onto which the canvas used for painting is stretched and secured with tacks or staples. They are usually sold individually, in pre-determined lengths, usually increments of inches.

## Subject:

A central theme that dominates the painting. The subject doesn't necessarily have to be a single object. It may be, for example, an atmospheric effect, a beautiful display of color, or a powerful display of dramatic values. It could be simply an interesting arrangement of picture elements (composition) or beautiful and interesting shapes or it can be many other things that attract the attention of the artist.

## Support:

The material that provides a surface on which paint can be applied. For oil painters, canvas is the most commonly used, followed by Masonite or wood panels. Paper or illustration board can also be used and are excellent for student work, but generally do not last as long as canvas or panels for work that is intended to be more permanent. Canvas or paper-based supports must be protected from the oil in the paint by applying gesso or a coating of special (rabbit skin ) glue size.

## Temperature:

A characteristic of color that gives it its relative "warm" or "cool" appearance.
Changing the temperature of complementary colors is fairly easy because when mixing complements, one color is pre-determined to be "warm" and one is pre-determined to be "cool".

In the Blue/orange complementary pair, for example, blue is the "cool" of the two, orange is "warm". Adding blue to any mixture of the two will "cool" the color, adding orange to any mixture of the two will "warm" it.

The warm and cool sides of complementary pairs are:
Cool: $\quad$ Warm:
violet --------------- Yellow
yellow-green-----red-violet
green----------------Red
blue-green--------red orange
Blue----------------orange
blue violet---------yellow-orange

On the circumference of the color wheel, a color could be said to be "warmer" than another color when it is closer to red than the other color. A color could be said to be "cooler" than another color when it is closer to blue than the other color. (Another way to describe this would be to say that the farther away from red on the color wheel, the cooler colors become and the further away from blue, the warmer colors become).

Red, the warmest color on the color wheel, and cannot be made any warmer. Blue is the coolest color on the color wheel.

For example (refer to the color wheel) orange, although already a "warm" color, is "cooler" than red orange because orange is further away from red on the color wheel.

Green is "warmer" than blue green on the color wheel because it is farther away from blue than blue green.

It also should be noted that adding white to any color or mixture will "cool" it.
Orange can be cooled in one of several ways then:
By mixing it with its "cool" complement,
By mixing it with a color (or colors) adjacent to it on the color wheel that are further away from red than orange.

By mixing it with a mixture of the color, or colors, above. (try to limit your paint mixtures to no more than three colors if possible, to avoid the muddying effect that over mixing produces)

By mixing it with white

## Toned ground:

A toned ground is colored with (usually) a warm, middle value (not dark or light, but between the two) color. The purpose of a toned ground is improve the artist's ability to judge values as he/she paint, as well as to impart a pleasing color, other than the white of the canvas, that may be deliberately or unintentionally exposed when the painting is complete.

## True complements:

When speaking of paint pigments, true complements are two complementary colors that, when gradually mixed together, will eventually yield a neutral color that does not display either of the two, sometimes called a "gray".

## Value:

The relative lightness, or darkness of colors, or color schemes.
"Low value" colors and color schemes are dark in value. "High value" color or color schemes are lighter in value.

Values are measured by a "value scale", a set of gray gradations between, and including, black and white.
Black is the lowest, or darkest value possible.
White is the highest, or lightest value possible.

Values between black and white are sometimes called "middle" values.

Paintings that are dominated by light values are sometimes referred to as "high key" paintings.

Paintings that are dominated by dark values are sometimes referred to as "low key" paintings.

Mixing color to the correct value is sometimes difficult for students who are learning to paint. Try to use of a toned ground of a warm middle value (not dark or light, but between the two). The middle value surface improves the artist's ability to judge the painting's middle values because there is already a middle value on the canvas to use as a guide. Once the middle values are established, they can then be used to establish the remaining lightest and darkest values.

Wash: (see turpentine wash)

## Wet in wet:

Arguably the most widely used technique for applying paint, wet in wet is a method of working wet paint into paint that is also wet. It's usually done with a brush or palette knife. The strokes of this technique tend to be smooth and more "painterly" looking. Although the initial brush stroke may blend to some degree with the paint under it, they are usually left as they are, as opposed to blending further.

Wet in wet is an effective method to make smooth transitions between objects in a painting that are adjacent to one another.

