

“There are moments in our lives, there are moments in a day,
when we seem to see beyond the usual.
Such are the moments of our greatest happiness.
Such are the moments of our greatest wisdom.
If one could but recall his vision by some sort of sign.
It was in this hope that the arts were invented.
Sign-posts on the way to what may be.
Sign-posts toward greater knowledge.”

-- Robert Henri

INTRODUCTION

There are as many reasons for studying art as there are students. Usually, however, people study art because they want to create things, and want to do it well; or because they like to look at art and would enjoy understanding how it was made. It is critical for any person to learn what it means to be oneself; to feel, think and express oneself as an individual. The arts play a vital role in this process, not only because they are accessible to all age groups, but because they are capable of touching and motivating us at our deepest and most creative levels.

I decided to write this book because I've never been able to find a single, clear textbook that teaches the fundamentals of art in a way that is easy to understand. This information has been gathered over the course of my forty-plus years of painting. I've learned from books, from public and private schools, from other artists, from my work in galleries, and most of all, from trial and error. I hope this book will save you some of the same trouble.

Whether you are a young student interested in a career in art, a professional person pursuing art as a hobby, or an older person returning to art after a long absence, this book is designed to benefit you. It includes a lot of detailed, practical knowledge. This sometimes abstract and complex information is made clear with lots of illustrations.

Each module of this book is designed to stand alone so that may study them in any order. At the end of each module are some 'Hands On' projects to help you get the most out of each topic. These are simple, practical and enjoyable. They can easily be adapted for classroom situations.

I wish you good success in your endeavors to learn all you can about art. Above all, remember to have fun!

Note: An effort has been made to locate sources and obtain permission where necessary for the quotations and artwork used in this book. In the event of any unintentional omission, modifications will gladly be incorporated in future editions.

“You who love this accomplishment because of a refined disposition,
which is the chief reason for engaging in our art,
begin by adorning yourselves with these vestments:
love, reverence, obedience, and perseverance.”

-- Cennino Cennini, 14th Century

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“The art student must be master from the beginning;
that is, he must be master of such as he has.
By being now master of such as he has
there is promise that he will be master in the future.”

-- Robert Henri

MEDIA

When we use the word ‘media’ we simply mean the tools we use to express our ideas. Sculptors use stone, wood, metal or clay. Singers use their voices; dancers use their bodies. These are all examples of media of expression. Notice that ‘media’ is plural; ‘medium’ is the singular form.

In this chapter, we are speaking of the media used for drawing and painting. A medium can be anything used to make a mark. The paper, fabric, wood (or whatever) on which the mark is made is referred to as the surface. Some media/surface combinations work better than others. Let’s take a brief tour through the most common media and examine their composition, history and which surfaces work best with each.

Drawing Media

Anthropologists tell us that there has been drawing as long as there have been people. In fact, artistic expression is one of the fundamental differences between animals and humans. Among the oldest surviving examples are the cave drawings at Lascaux in France.



early cave drawing at Lascaux, France

Charcoal



Prehistoric people sometimes used charcoal (burnt sticks) to make their marks on cave walls. These must have been very similar to today’s charcoal sticks made of charred willow or vine. Charcoal makes a very dark, velvety black mark on the page, and it smears easily, so it’s good for shading. Usually charcoal is used on a special kind of paper called (sensibly enough) charcoal paper. This paper is subtly colored and rough. When paper has a rough texture we say it has ‘tooth.’ Tooth is just a goofy term for roughness.

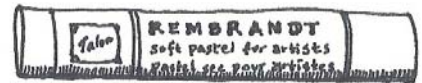
Chalk



Chalk is another natural material that is soft enough to make a good drawing medium. It's actually a dry, crumbly sort of rock. Its texture is like that of charcoal and it is often used on the same kind of paper.

Both charcoal and chalk drawings rub off easily, so after they're finished it's a good idea to frame them under glass. Some teachers recommend spraying them with the spray fixative sold at hobby stores, or even hairspray. This is not a good idea. The 'spray fix' may damage your piece over time. In other words, this technique is not "archivally sound." However, if the work in question is a student exercise rather than a finished piece of fine art, you know you won't be having it framed and you don't care if it lasts longer than a few weeks or months, spray fix can be used.

Pastel



Pastel is a medium that is easily confused with chalk. Pastels are different, though, because they are man-made rather than naturally occurring. The pigment (the stuff that gives them color) is mixed with gum Arabic, kaolin clay, and/or oil that makes the mixture clump together (so it can be formed into sticks) and also makes it adhere to the page.

Pastel quality (and price) vary greatly, and it's really worthwhile to buy the more expensive ones. The cheap ones are made with waxy fillers and have terrible handling properties. Good ones rival fine oil paints for control, color-fastness and beauty. Also, they have the quality of being 'forgiving,' that is, they allow for the correction of mistakes. Further, the good ones are sold individually, allowing you to build your collection at your own speed and with the colors you are most likely to use. I've had success with a brand called Rembrandt that is widely available.

Pastels are used on paper that is very much like charcoal paper. Degas dipped his paper in turpentine first, which gave a beautiful, watercolor-like effect and also helped preserve them.

Don't let the name fool you – pastels come in an enormous range of vivid hues. One of my favorite techniques is to use bright pastels on black paper. Or try a medium-toned paper and add the darks and lights (also a good technique for colored pencil). This saves time, preserves your pastel sticks and is a lot of fun.

Crayon



Most everyone has used crayons before. But not everyone knows that crayons are not just for kids. Artists have been using crayons for thousands of years. A crayon is similar to a pastel stick except that, instead of gum Arabic, oil or clay, the pigment is mixed with wax. The cheaper the crayon, the more wax is used. Hence, inexpensive crayons can be used together with water-based paint in a technique called 'wax resist.' That's because the wax in the crayon

‘resists’ the water in the paint, so the paint will only go where the crayon *isn’t*. Wonderful effects can be attained in this way. Experiment and see.

Crayons can be used on many kinds of paper, smooth or rough. White paper is usually best, because crayons don’t have enough covering power to mark over bright or dark colors. If you intend to paint over them, better use thick paper, like watercolor paper, that is designed to soak up paint without wrinkling.

Sometimes manufacturers use the designation ‘crayon’ to refer to any kind of pigment in stick form. The old masters used a chalk type of crayon called ‘sanguine’ for their sketches. ‘Sanguine’ comes from the Latin word for blood, and although (of course) these crayons are not made from blood, they are a brownish-red color. Today a company called ‘Conté à Paris’ (pronounced: con´-tay äh pa-ree´) makes a popular pencil-style ‘Conté Crayon’ that is fun to use and comes in a range of colors, including sanguine.

What we call colored pencils are actually just a type of crayon in a wood casing instead of a plain stick. They are marvelous for students because they offer ease of control and subtle color gradations, and can help bridge the psychological transition from pencil to colored media. One popular brand is Prismacolor™.

Pencil



Pencil is another medium with which everyone is familiar. Modern pencils featuring a thin ‘lead’ in a wood casing date from about the beginning of the nineteenth century. A pencil ‘lead’ is actually made of graphite mixed with clay. Pencils come in varying degrees of hardness, depending on the amount of clay used. The harder the lead, the paler the mark it makes. Hence, to get a rich, dark black you want a very soft lead. Artist’s pencils will be marked with a letter to indicate relative hardness. ‘H’ is for hard, ‘B’ is for soft. (I don’t know why it isn’t ‘S’ for soft. I didn’t invent this confusing terminology; I merely report it.) A ‘2-H’ pencil is double hard; a ‘4-H’ pencil is quadruple hard, and so on. The same for B’s. It is good to own a range of pencils and erasers.

Many professional artists sharpen their leads with a knife rather than a sharpener. This allows for more control over the shape of the point.

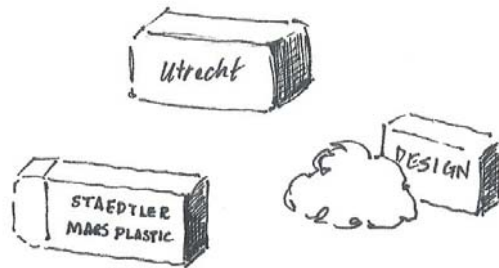


hand-carved pencil point

Pencil works well on a variety of surfaces, and interesting effects can be achieved using textured papers. It is worth noting that graphite reproduces poorly in copies and photographs, hence it is a very poor medium for illustration, graphic arts or printmaking. This is also why

printmakers sign their work in pencil: it can't be reproduced and so collectors know the piece is original.

Another important quality associated with pencils is that they can be erased. This can be important for students who are not yet confident of their abilities. There are many kinds of erasers available to help you. I like gum, kneaded rubber and plastic the best. The old pink kind we used in school is just too likely to tear your paper. The newer plastic erasers can be carved into a point to help you get into tight corners in your drawing. The kneaded rubber kind can be pulled into a point for the same purpose. Remember that you can use an eraser to strategically remove the graphite in highlighted areas. This is referred to as a 'subtractive' drawing process.



plastic, gum, and kneaded rubber erasers

Ink



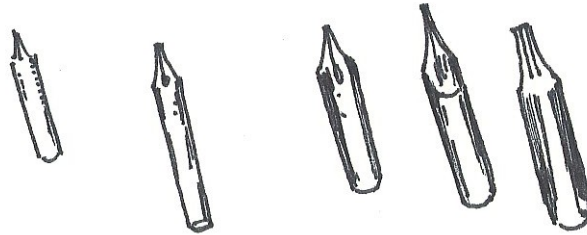
Traditional India ink is a popular medium for both drawing and painting. It was originally made from the soot of oil lamps and makes a very dark and smooth indelible black. It can be used with a pen for fine lines, or a brush to cover larger areas. It thins with water.

Unlike graphite, it reproduces well in copies and photographs, so it makes an excellent medium for illustration and graphic arts. One very useful technique is to mark out your design lightly in pencil first, and then go back over your lines with ink. After the ink is *thoroughly* dried, the pencil can be erased. This is a great way to do lettering, or portraits, or cartoons, any kind of drawing in which it is imperative to have the lines in the right place the first time.

Because India ink is indelible when dry, you can paint over it with watercolor (make sure it is real India ink and not the water-soluble kind). While wet, ink responds to applications of water, salt or alcohol much like watercolor, which render some interesting effects. This is a dramatic phenomenon with which to experiment.

Ink works well (though differently) on smooth or rough, hard or absorbent paper. It can be wonderful on watercolor paper or rice paper. Unfortunately, it's messy and almost impossible to get off of clothes and hands. Also, it's hard to control and takes practice to master.

A 'nib' is the detachable metal part of the pen. Many types of pen nibs are available. It's important to use the right nib for the kind of line or letter you want. Notice that one only needs one 'staff' (handle) because the various nibs will fit the same staff interchangeably.



various kinds of pen nibs

Modern pens made with felt or metal tips are very popular among graphic artists. They are easier to control than traditional 'crow quill' pens, and also come in various nib styles and sizes. They are fantastic for very fine detailed work.

Nowadays, brightly colored, non-water soluble (indelible) inks are available in addition to black. These can be great for working on surfaces like plastic (animation cells or colored audio-visual presentation overheads for example). These inks are available in bottles for use with traditional staff-and-nib pens, or in felt-tip markers.

Markers are best used on smooth, hard surfaces. On rough paper they tend to run and bleed. Also, they are a very wet medium, so they tend to wrinkle up the page if you cover a large area with them. For this reason, a thick, smooth surface like poster board or illustration board works very well. It is good to store markers tip-down so that gravity will pull the ink toward the tip and help keep them moist and usable. Special racks are available to store markers, but a box or jar will do just as well.

Silver Point



Silver wire will make indelible drawings on smooth watercolor or drawing paper that has been thinly coated with Chinese white watercolor. The wire is sharpened into a point and held in an etching needle holder or a thicker rod of silver. The silver marks tarnish over time, and this is not considered a defect. Gold and platinum are also used in this way, but of course do not tarnish. Metal point drawings are noted for a certain delicacy of line.

Painting Media

Traditions regarding painting materials have survived since ancient times. Unfortunately, in recent years these traditions have tended to be passed on in terms of 'how' with regard for 'why,' leading to the degeneration of our craft into merely a fixed set of rules. By the end of the nineteenth century, few painters were equipped with an understanding of the science of this art.

It was a short step from this lack of understanding to the modern conviction that too great a concern with the fundamentals of chemistry and other technical knowledge would interfere with artistic free expression. Nothing could be further from the truth. In fact, most of the work produced in this belief is generally the least valuable, lacking both craftsmanship and beauty.

This general ignorance has also led to the silly notion that the great masters of the past had mysterious and closely-guarded secrets through which they obtained certain effects and the permanence of their work. Rather, they took the time and made the effort to learn the mastery of the craft. You can, too. You'll find it to be a very satisfying and rewarding effort. Professional artists with a sense of honor consider it a duty as well as a privilege to provide their collectors with the best quality craftsmanship possible.

With the exception of a few new or improved products resulting from the industrial age, the raw materials used in art techniques are of far greater antiquity than is popularly realized. We have as ancient literary sources the works of Pliny, Vestruvius, Theophrastus, and Discorides, among others. Many of these describe ingredients and manufacturing processes similar to those used today.

All types of paints are made from the same pigments (dry color). The difference is in the binders, media, preservatives, and solvents that give each kind of paint its unique qualities. Let's take a look at the most common artists' paints and how they are made and used. We'll also discuss the properties of each and the surfaces with which they work best. I hope to inspire you to try new media; I also hope to enable you to make educated decisions about which to use for what types of projects and which best fit your personality.

Oils



Oil paints are among the oldest types of paint. Have you ever seen a tribesman in a movie painting his face with clay mixed with bear grease? Yup, that's oil paint.

Today's artists' oils have been around since before the thirteenth century. One of the first major painters known to have worked in oils was Jan Van Eyck.

Oil paints have a distinctive aroma that many of us find...well, *irresistible*.

Predictably, the main ingredient besides the pigment is oil. The oil functions as both binder and medium. The binder is the ingredient added to pigment to make the dry pigment powder stick together, while the medium is the element that makes it 'flow' (disperse evenly) and stick to the painting surface. It is not sufficient to merely mix the pigment with the oil, they must be ground together under great pressure. For quality, look for oils that bear the U.S. Department of Commerce's standard CS98-62 (or T-SI). Those not bearing this number may be substandard in some way. Paints of foreign manufacture may conform to other lightfastness standards such as the British Woolscale or the German DIN (see Appendix III). A company called Williamsburg Art Materials makes very fine hand-ground oil paints and can be found at

www.oilpaint.com or call them at (607) 276-6254 for a free information kit. Their color charts feature actual samples of the paint, rather than an attempt to match the colors with printers' inks. This lets you see the exact color, the textural qualities and the covering strength of each paint, which is valuable.

Oils may be diluted or removed with turpentine or mineral spirits. Turpentine is a better choice from an archival standpoint, but mineral spirits smell milder and are less likely to cause allergic reactions, so are a better choice for classroom situations. Both are highly flammable and need to be handled with appropriate caution.

Oils are popular because of their versatility, 'feel' and traditional quality. Additionally, original oil paintings tend to sell for more money than other media of the same size. Oils are among the most forgiving of media, allowing for infinite revisions and corrections (assuming you don't put it on too thick). The paints themselves are more expensive to use than watercolors, which puts off some beginners. That is a shame, because they are really much easier to handle than watercolors or acrylics.

The main drawback to painting with oils is that they take a very long time to dry. This can be overcome by adding a 'siccative' or dryer to the medium. If you choose to add a siccative (such as copal/cobalt – my favorite) remember to use only a tiny bit. Too much siccative weakens the 'skin' of your paint and causes cracking and other problems in the finished painting. I use one drop in about eight ounces of painting medium. In this context, by 'painting medium' I mean the jar of liquid that I use to thin my paint when I am applying it to the canvas, just as one uses water to thin watercolor. I use half turpentine and half minerals spirits (with that drop of cobalt siccative that makes my paints dry almost overnight). Artists call this mixture 'slops' and we like to argue about what to use for the best results.



my jar of slops

Oils also require special understanding of layering techniques to ensure archival soundness and avoid cracking and peeling. Oils should be painted 'fat over lean' (oiliest paints on top, 'shortest' paints near the canvas).

Dark colors should always be washed on very thin (in successive layers, if necessary), while lighter colors, especially white, should be thicker and more opaque. This simple technique by itself can raise your work to new levels of professionalism.

One should avoid very thick blobs of paint which can dry on the outside but not on the inside resulting in cracking. If a very heavy impasto effect is desired, it is better to build up the canvas with gesso, modeling compound or thinners layers of paint. Oil paintings should be allowed to cure for at least six months before varnishing.

Oils are traditionally painted on primed, stretched cotton or linen canvas. Some artists paint on wood, Masonite™, paper or glass. Except for glass, these surfaces need to be carefully primed to protect the painting from the acid and lignin in the surface. We will talk about surfaces in more detail in Module II.



Watercolors

Watercolors are made of pigment plus gum Arabic and – of all things – honey. DO NOT taste them to find out for yourself: many pigments are poisonous.

Watercolors are popular for a number of reasons. First, they yield magnificent, vivid, transparent colors. Secondly, they are so fluid to work with that they occasion ‘happy accidents’ where the painting is better than the sum of the artist’s skills. Their reverse is also true, however, they are so fluid to work with that they are difficult to control and even a competent artist can make glaring mistakes that are hard to correct.

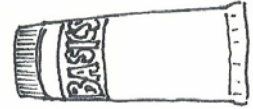
Many artists use watercolors because they began with them as children and really never tried anything else. Children are often given watercolors because they wash out of clothes easily and the sort made for children are non-toxic.

Watercolors also offer the distinct advantage of being easy to transport because they dry so quickly. Also, because they are water soluble, they are safe to use (unless you ingest them) and have no strong odor.

Watercolors really work best on watercolor paper, which is specially made to be absorbent and resist wrinkling. Good watercolor paper is made of 100% cotton rag and comes in two varieties: hot- and cold-pressed. Hot-pressed has a harder surface and cold-pressed is rougher. Which kind you should use depends on the effect you are after. Different thicknesses are also available. It can be purchased in tablets, in sheets or by the roll. Often students in a class will pool their money in order to buy a whole roll. This is much more economical than buying by the sheet. For more about watercolor paper see Module II, *Tools*.

If you intend to show your work in competitions, you should be aware that watercolor juries are by far the pickiest and most demanding. Typically works that incorporate other media such as gouache or acrylic will be rejected because they are not pure watercolors. And true purists insist that whites must be rendered by leaving blank paper, not painted with white paint.

Acrylics



Acrylic paints are made of synthetic resins developed in the twentieth century. They first came on the market in the 1960's. These resins are similar to household glue. The chief advantage of these paints is that they dry permanently flexible, forever resisting cracking and peeling. They are an archivist's dream in that sense. Conceivably, and acrylic painting done on polyester could outlast not only you and me, but also our entire culture, down through the ages.

Acrylics are water soluble as long as they remain wet, but become indelible when dry. This makes them useful for painting on things other than canvas. They dry very quickly, and the only solvent that MAY remove hardened acrylic paint from your stiff brushes or clothing is rubbing alcohol, left to soak overnight and then washed out with soap.

Another caveat: if you use the same brushes for both oils and acrylics it will ruin your brushes in a very short time.

Acrylics can be used like watercolors (thin transparent washes on paper) or like oils on canvas. Overall, I think acrylics are less satisfying than either. The colors tend to be artificially vivid, but not as pretty as watercolors, nor as subtle or forgiving as oils. Their main advantage over oils is that they dry much faster. Using acrylics as underpainting (the first few layers) can be a wonderful way to speed up the lengthy process of painting with oils. Again, be aware that using the same brushes for both kinds of paint will eat up your brushes *very* quickly.

The greatest advantage of acrylics over watercolors is price. Acrylics are a boon to students learning to paint who don't want to waste a lot of money on fine oils or watercolors to do their color and design exercises. They also are easier to control than watercolors, but while most good watercolors are transparent, some acrylics are opaque.

Acrylics can develop a bad smell, which doesn't mean they need to be thrown out, it just means you won't enjoy the smell while you're working with them. However, if they've gotten hard or rubbery, they can't be reconstituted and need to be discarded (something that almost never happens with oils or watercolors).

Alkyds

Like acrylics, alkyds are also made of synthetic resins. They have the vivid colors of oils and dry faster than oils. The downside is that unlike acrylics they are not permanently flexible. If you want them to last you must paint on an inflexible surface, such as board, and not a flexible surface such as canvas.

Temperas

Interestingly, eggs are one of the main ingredients in temperas. The traditional artists' quality temperas also contain linseed oil, unlike the cheap poster-paint type of tempera. Tempera has been used for centuries to underpaint oils. Temperas dry quickly, but are difficult to blend with any degree of subtlety.

Gouaches

Gouache rhymes with ‘wash.’ Similar to watercolors, gouaches are made of pigment and gum Arabic, but gouaches also contain chalk to make them opaque. They are very popular for design and works on paper. Traditionally, this was the medium used in art school for completing student exercises (before the computer age). Gouaches have very satisfying handling properties. Modern gouache is very similar to the water-based paint traditionally used to paint frescoes. Frescoes are so named because they must be painted on fresh lime plaster. A chemical reaction between the plaster and the paint is what renders them permanent. This is rarely done any more, for several reasons. First, it’s an expensive method, and evidently it’s harder to get a commission from the Pope than it used to be. Also, hardly anyone plasters any more, it’s all sheet rock which is not *at all* inspiring.

A good white gouache can be used as ‘white out’ for watercolor mistakes. This common illustrator’s technique is fine while you are learning, but it will disqualify you for many competitions.

Enamels

Enamels are based on either organic or synthetic resins (like epoxy), and require acetone or other strong solvents to dilute them. They are extremely difficult to work with and they don’t lend themselves to blending or subtle gradations of color. But they are very permanent and appropriate for a number of surfaces, so they are widely used in the decorative arts like model making, exterior finishes, etc. Nail polish is another example of a common enamel. Organic resin-based enamels have been popular for two-dimensional decorative work on wood and metal for hundreds of years.

Caseins

Casein paints are very similar in use to tempera, but instead of eggs, caseins are made with milk curds. They also have been popular for underpainting in oils, and many of the old masters used this method.

SUMMARY

These are the basic differences in drawing and painting media. Any medium can be satisfying if you understand how to use it properly. The best way is to experiment with as many as possible and find the choices that suit your taste, temperament and budget.

One way to inexpensively experiment is to buy only the primary colors (see Module II, *Color*) of each kind of paint and mix the other colors from them. Or, find a friend who has supplies you lack and offer to trade some of yours for a week. Alternately, get in a classroom situation where lots of choices are available.

HANDS ON

1. Fold a piece of Manila paper into six squares. Time yourself with an egg timer set for 6 five-minute intervals. Fill each square with a small design or picture; each with a different medium, allowing only five minutes for each. (The timer is simply a tool to avoid the temptation to waste a lot of time on something that is simply an exercise and not intended to produce a great work of art.) The goal of this exercise is to simply acquaint you with the handling properties of several media. This is a great “ice breaker” exercise for new classes or for a person returning to the visual arts after a long absence.
2. Paint with India ink on bond paper (like plain copier paper). Make a broad wash of ink. Apply a spritz of alcohol from a spray bottle. What happens? Try shaking salt on the painting. What happens? Try the same things with the ink at various stages of drying. Try the same thing with watercolor instead of ink. Now make a line drawing with India ink and let it dry. Paint over it with watercolor. What happens?
3. Visit a gallery that shows only original art or a museum. Without looking at the title board, can you guess what medium the artist used? Practice until you begin to get the right answer often. Clue: usually oils are not framed under glass, while watercolors and pastels are. Acrylics can mimic either oils or watercolors. Prints, like silk-screens, lithographs and serigraphs can be very tricky!