

The Watermark

In watercolour painting there is a particularly strong inter-relationship between paint and paper, in which the light that reflects off the whiteness of the paper through layers of colour produces vibrant and luminous results. This process of layering transparent or translucent colours also creates the illusion of depth. Watercolours are highly versatile as they allow the artist to create many things from preliminary sketches, studies and final works, to drawings. These are amongst some of the properties unique to watercolour painting which make it an exciting medium to learn.

Watercolour Paint

For centuries the production of watercolours involved the making of brittle cakes of paint. In the 19th Century, William Winsor and Henry Charles Newton of Winsor and Newton fame, added glycerin to the process of manufacturing these cakes to develop most pans. Glycerin enabled the cakes to retain moisture, reduce brittleness and increase the paint's solubility in water. Moist pans soon became the watercolours of choice for outdoor painters in Europe, while tubes of paint remained the favourite in North America.

The pigments used in making watercolour and other paints are not soluble themselves. Instead, it is the medium in which they are carried that is soluble and allows them to disperse over the paper surface. Most pigments simply lay on the surface of the paper however, there are some pigments, which are considered "staining" pigments and as such, actually stain the paper fibres.

These staining pigments include Alizarin Crimson, Winsor Blue and Winsor Green, and Phthalo colours, among others.

The quality of watercolour paints varies from student to artist quality, depending upon the type and quantity of pigment used. Probably the most valuable and rare pigments are the genuine pigments of Ultramarine Blue (Lapis Lazuli) and Rose Madder Genuine. As most seasoned watercolourists will attest, no synthetic can match the colour and quality of either of these genuine pigments.

Physical characteristics of a good paint include saturation, transparency, opacity, lightfastness, and staining power. Knowing the idiosyncrasies of each paint colour and understanding these characteristics enables the watercolourist to use each colour to their best advantage.

Transparent colours allow light to pass through and reflect off the surface on which the transparent colour is applied, in effect producing their luminosity.

Opaque colours when mixed with other opaque colours generally do not produce good results. Opaque colours let little or no light through which affects how the colour is perceived. If mixed together they result in loss of light and product muddy, dead colours.

Watercolour Mediums

Mediums are mixed with watercolour paints to alter the drying time, improve and control flow, add texture, or allow for smoother blending. Ox Gall and Gum Arabic are traditional watercolour mediums.

Gum Arabic is the natural binding agent used in watercolour paints.

Ox Gall Liquid is used to increase the wetness of your washes and improve the flow of your paint.

Permanent Masking Medium and Art Masking Fluid

Permanent Masking Medium enables you to mask specific areas and make them resistant to water and colour – keep in mind that it does resist some colours better than others. It can also be mixed with watercolour paints directly so that the details you paint become permanent once dry.

Art Masking Fluid allows you to mask large areas of white paper or previously coloured areas to temporarily protect them from watercolour washes.

Stretching Watercolour Paper

The decision to stretch watercolour paper is based on the weight of the paper and the techniques used when painting. Paper expands when it absorbs water and shrinks again when it dries, which can result in buckling. Stretching is a technique which, by flattening and fixing the edges of watercolour paper when wet, a taut and springy surface that resists buckling is produced.

If you are painting with particularly wet colour washes on any lightweight watercolour papers, generally 140 lb. or less, you will need to stretch your paper. You may not have to stretch 140 lb. papers which are heavily sized. The heavier papers such as 200, 300lb and 400 lb. do not usually require stretching. Most watercolour paper is 22" x 30" and depending upon your individual requirements you may choose to tear these sheets into half or quarter size pieces for stretching.

Stretching Watercolour Paper with Gum Tape

Step 1: Cut or purchase a piece of plywood or Masonite slightly larger than the biggest size of paper you will be working with. The board should be at least ¼" thick as paper shrinkage and wetness can cause a thinner board to bow. Then seal the board with a waterproof shellac or lacquer on the edges, front and back and let it dry. Next, wet your paper by submerging it in water for a few minutes. Make sure both sides are evenly wetted.

Step 2: Remove the paper from the water and place it on the board in the position it will be stretched. Leave it for a few minutes to ensure the water is completely absorbed. When the buckling appears to have reached its limit, dab off any excess water.

Step 3: Dry the edges of the paper where the gum tape will be placed and cut the gum tape into lengths which correspond with the sides of the paper. Wet the sticky side of the tape and stick it down, leaving half of the tape sticking to the paper and the other half to the board. Be careful not to over-wet it. Continue this process for the other three sides while gently pulling the paper taut as you tape each side.

Step 4: When all four sides are taped down, use a sponge or cloth to wipe over the gum tape and press down to make sure good adhesion is made between the two surfaces. If there is any excess water which have formed, mop these up so they do not run into the gum tape, dissolving the glue and weakening the adhesion.

Step 5: Leave the paper to dry flat for a few hours so that your paper dries evenly. It is best to allow the paper to dry naturally without an artificial heat source – a hair dryer could cause the paper to dry unevenly and create an uneven pull. Check your paper during the drying process to make sure that it dries evenly and that all sides stick to the board. Reinforce any sides which come away with additional pieces of gum tape.

Step 6: To remove, re-wet the tape and peel it from the paper when everything is completely dry. The tape can also be removed dry instead of wet.

Watercolour Blocks

Watercolour Blocks consist of a stack of sheets of watercolour paper glued together on all four sides, eliminating the need for stretching. After a piece is completed the top sheet can be cut away leaving a fresh working surface. There is normally about one inch on one side of a watercolour block without any glue to allow you to easily insert a dull knife or letter opener for removal. Watercolour blocks are excellent for outdoor sketching as they provide the convenience of a taut surface without having to carry a sometimes cumbersome stretching board. Opus carries paper stretching boards and blocks for the professional and beginner artists.

Watercolour Brushes

Generally, watercolour brushes are made of soft hairs, unlike the bristle hairs which are used for oil painting brushes. Sable, Squirrel, Ox-hair, Pony and Goat are some of the soft hairs used for making watercolour brushes. Depending on which hair is used and the size and shape of the brush, a watercolour brush can range from a dollar or two, up to several hundred dollars per brush. In looking for a fine watercolour brush it is important to look at the tips or points of the brush. The tip is the natural end of the hair or bristle and these are never cut – all the shaping and trimming is done at the root end. The tip should come to a fine point and beyond its widest point or “belly” the hair will then taper somewhat towards the root. Before buying, you should try testing watercolour brushes in a jar of water to see if the hairs come to a point.

Brush Shapes

When starting out with watercolour painting it is best to have a selection of the most common shapes and sizes of brushes thus allowing you to paint everything from small and detailed works to larger more expressive pieces.

Rounds

Rounds are a must for the beginner (and expert) watercolourist. When built properly, they can create fine, thin lines or by adding a bit of pressure allow you to move into broad washes. Rounds range in size from 00 (the smallest) to 16 (the largest). Rounds have a fine tip and full belly.

Flats

Flats are built to leave a hard edge, and precise stroke. They can hold a lot of paint and are great for blocking in colour. Flats are available in 1/8" to 2" wide.

Filberts

Filberts are also constructed similar to that of a flat but filberts have a rounded tip making it look as though it is worn out.

Oval Mops

Oval mops are ideal for applying large, loose washes of paint, and although the oval has a controllable tip, it is less articulating than the perfect tip of a well built round.

A Watercolour Glossary

Buckling	The ripple effect which results from wetting flat paper.
Cake	A small block of solid watercolour paint.
Compliments:	Opposites on the colour wheel, ie. blue and orange are complimentary. They consist of one primary (blue) and one secondary (orange) colour. One is warm and the other is cool.
Dextrin	Some paint colours contain Dextrin to improve the smoothness and brushing quality of their pigments.
Dry Brush	Technique used for fine detail work and building up textures. Also used for blending the line between two colours.
Gesso	Usually a white liquid used as a painting ground. Traditional gesso is mixed by the artist as needed out of chalk or slaked plaster, titanium white, and animal glue. It is also available in a ready-to-use acrylic form.
Glazing	A technique which involves layering a series of transparent colours to create rich colours and depth.
Glycerin	Adds moisture to paints and increases their solubility.
Gum Tape or Butcher's Tape	Brown paper tape with a gum on one side, primarily used in stretching watercolour paper. The gum is activated with water.
Hue	The actual colour of a material, or its colour name ie. turquoise or blue green.
Inert Pigment	A fine powdered pigment, which when added to a coloured pigment, does little to change its hue. Inert pigments are usually added to change the properties of a paint, for example, to change a transparent watercolour paint into an opaque gouache.
Inorganic Pigments	These colours are mined directly from the earth (eg. ochre, umber). They are generally quite heavy in weight and opaque in colour.
Intensity	The colour's saturation, its brightness or strength. The degree of reflection.
Lifting	A technique used for removing colour, which is still damp, from the painting surface.

Lightfastness	A term applied to pigments to describe their ability to resist fading with continued exposure to sunlight. If a colour is light fast, it is considered to be permanent.
Masking	Protecting an areas of your painting. Masking fluid is used for protecting intricate areas and can be rubbed off with either your finger or a good quality eraser.
Medium	A solution added to paint to alter or enhance its properties. Mediums can alter drying time, improve and control flow, and add texture amongst other things.
Non-Staining	Used to described pigments which are easily lifted from watercolour paper leaving little or no stains.
Opacity	The ability of a pigment to absorb more light than it transmits or reflects. The refraction of light off of pigment particles impedes its transmission and reflection. This results in more light absorption, less colour intensity and increased opacity.
Organic Pigments	are of vegetable or animal origin (eg. Bone Black). These pigments are lighter in weight and more transparent than inorganic pigments.
Pans or Half-Pans	containers which hold cakes of watercolour paint. Half-pans are more readily available than full-pans.
Primary Colours	Red, yellow and blue. These colours cannot be produced or mixed from other colours.
Saturation	The degree of intensity of a colour. Or, the concentration of a material in a solution to the limit of its solubility.
Scraping Out	Creating highlights by using a sharp implement to scrape colour away.
Secondary Colours	Are produced by mixing any two primary colours to produce orange, green and violet.
Sizing	A material such as animal glue, gelatin, vegetable starch or synthetic which is added to the pulp or paper surface to make the paper less absorbent and hold the fibres together.
Sizing – Tub	A surface sizing process which passes a dried sheet through a tub size bath or vat. This process reduces the overall absorbency of the paper allowing greater control when working and reworking the surface. Many watercolour papers are tub-sized.
Splattering	A technique for creating textured effects. Short haired, stiff bristled brushes can be used to create this effect. By using your fingers

you can “splatter” the paint off a brush by pulling back the bristles and slowly releasing them.

Staining	Used to describe pigments which stain paper and are difficult or impossible to lift. Lifting Preparation Medium can be used with these paints to improve their lifting properties.
Stippling	A technique for creating textured areas or for the gradation or blending of colours. The blunt end of a brush can be tapped exactly perpendicular to the surface of the paper to create this effect.
Substrate	Base or underlayer.
Surface Tension	Water has a high surface tension which causes it to form drops or bead. This is particularly noticeable on heavily sized paper.
Synthetic Inorganic Pigments	Are for the most part transparent. When used at full strength, their intensity gives them extreme hiding power. These pigments are manufactured with a high resistance to fading. They can be added to genuine organic pigments to cut costs.
Tertiary colours	Are produced when three or more pigments of different colour are mixed. A mixture of two or more colours means less brilliance than a single colour.
Transparency	The ability of a pigment to transmit and reflect more light than it absorbs. Transparency is relative to the intensity of a colour. All pigments are transparent to some degree – some more than others. Transparent pigments are good for mixing and layering.
Tinting Strength	Also referred to as tinctorial power, it is a measure of pigment which is controlled by specific standards to ensure that the tinting strength (resulting colour) of each pigment is a true example of its prototype.
Tubes	Watercolour paints of paste consistency are manufactured in soft metal or plastic tubes which can be squeezed or rolled up to release the paint.
Value/tone	The relative lightness and darkness of colour.
Viscosity	Is the resistance of a substance to flow. With regards to paint, the lower the viscosity, the more mobile or runny it is. The higher the viscosity, the thicker or more resistant it is to flow.
Wash	An application of paint applied quickly and consistently, usually using a large flat brush which will hold a large amount of liquid colour.

Wet-on-Dry

Technique of using wet paint on dampened paper. Paint is applied to the paper and allowed to spread, run and bleed.

Wetting Agent

Is a synthetic used in the manufacture of watercolour paint. It replaces the use of Ox Gall and improves the flow of paint on paper surfaces.