

## THEMATIC UNIT Nº2

### TOOLING.

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## 2.1. MAIN TYPES OF BRUSHES AND PAINTBRUSHES.

The brush is composed of three parts: hair, ferrule and handle. The brushes are distinguished by the nature of your hair, and their shape and size; will be chosen either by the process, technical support or to whom it is intended.

So because of the kind of hair, will be fine hair brush or coarse hair brush, and according to its form round brush or flat brush. Within each group, different measures are ordered by their numbering.

### Soft hair brushes.

The best hair brushes are fine, no doubt, the sable (the kind most esteemed, the Kolinsky), resulting in exceptional watercolour, although they are often replaced by the ear of ox ones, more economical. There are also those of mongoose, weasel, otter, and the gazelle and squirrel commonly used in schools. Still by far the cheapest are the pony ones. All the above brushes are natural hair and in general are characterized in addition to being soft, having a large water absorption capacity. In this sense, make them ideal for watercolour.

### Hard hair brushes.

Haired brushes are made of bristles from the pig and wild boar (Chinese bristles are of higher quality) as well as badgers and other animals. Its main feature is its hardness, which makes them optimal for procedures likely to be used with the technique of *impasto*. When are round, its particular shape pushes the load pictorial toward the lateral edges and can heighten the effects of texture with the burr produced.

### Synthetic hair brushes.

Currently, synthetic fibres commonly used are nylon or polyester. They are a good and economical alternative to natural hair brushes. Assume hybrid features between soft hair brushes and hard hair brushes. You could say they are not as soft as sable brush type, but they are not as stiff as bristle brushes. Generally have the particularity of returning to its initial position, although they are more sensitive in terms of durability in the case of no conveniently cleaned. If left too long into solvent lose their properties and deform, so that should be quickly degreased with soap and water. This type of brush is highly recommended to apply varnish and glazes as well as techniques such as egg tempera.

### Round brushes.

The round brushes, when sable hair, often used for aqueous procedures like watercolour, fresco, tempera, because they retain more fluid. It shows his quality to retain the tip in any condition, wet or dry; as this lets you use a medium size brush for fine lines.

### Flat brushes.

The flat brushes can be used both for lean techniques to technical fats. Its particular form usually predict a very particular kind of finishing asociable to painting modelled by planes and also to flat inks since thins the paint layer and stacking painting load is not usually at the edges of the brush. These brushes can have different shapes.

### Cat tongue brushes.

These brushes typically have a flat profile and slightly rounded at the sides, are generally used to both detail and major surfaces. It combines qualities of both the brush flat and the rounded tip.

Depending on the work to which the brush is intended this will also introduce other types or forms, such as kickstand shaped, the binders, and filleting, the polonaise and the applicators of the gilders, the rubber, etc. Each case will advise by experience the proper brush for any procedure and technique.

### Brushes.

The brushes are brushes round and rather large size, hard hair from the mane or tail of a horse, and that in the case of larger brushes, have the distinction of being hollow at its core, which makes them lighter when painting large surfaces such as a wall.

Medium sized brushes don't have the center hole and are well suited for priming substrates such as canvas or board.

These brushes, when its shape is flat, called stirrers.

Natural bristle brushes are always the highest quality, but they may be artificial bristle -inferior quality-, usually used for these artificial cleaning tools and other necessities.

### Oriental Brushes.

Oriental brushes are made of goat hair, pig or wolf inserted into a bamboo handle. They are usually flexible and can be used to produce a wide variety of makes and records ranging from the fine line and broad stain, all of them made with the same brush that takes this particular form of design (rounded and wide at its base, elongated and very thin at the tip) and high adsorption capacity of the hair.

Rubber brushes also known as *shapers*.

Brushes of this type have an appearance similar to a formal conventional brush with the difference that instead of hair have flexible rubber tips. These spikes can be soft or hard rubber and are subject to a variety of forms ranging from the very wide and flat tips, even much smaller ends with tapered or chamfered shapes. Offer great advantages over other types of brushes, as their great longevity, and ease of cleaning. These brushes can be used with all types of paints and offer a type of finish perhaps much more like a spatula than a hair brush.

## **2.2. RECOMMENDATIONS ON THE USE, CARE AND CONSERVATION OF THE BRUSHES.**

- We will get wet the new brushes before using them for the first time, in water, for at least three hours to avoid so that these hair falls in the first sessions.
- The new brushes, with long hair should tie them with a thin string.  
Do not allow water to exceed the ring, as if the wood gets wet the handle through the shell, increasing its volume inflated, giving the ring back becoming loose the handle.
- Hang, bound by the handle when the brushes are fine animal hair, it is highly recommended to prevent the deformation by its own weight.
- After use, it is necessary to clean the brush, is first necessary to remove the excess paint with a cloth, after a suitable solvent is used according to the procedure used (turpentine oil, water for vinyl, acrylic, tempera, watercolors and egg tempera lean, etc.)
- Then to improve cleaning and degreasing hair, it is necessary to wash the brushes with soap and water using the palm of your hand. Once clean, you can also leave the hair with some soap in order to avoid differences, but in taking up the use of the brush we must bear in mind that soap should be removed from the hair.

## 2.2. SPATULAS, PRIMERS, SCRAPERS AND KNURLS.

### Spatulas

Whatever its form, knife or palette, are very useful for mixing as well for painting. Depending upon its shape is divided into straight and elbow. The first are generally used to clean the palette, the latter to paint and work with large fillings and very dense putty. We could then specify the straight ones in the form of knife, blunt, and the elbow ones primarily rhomb spatula and the more comfortable, the trowel that is like that of the builders but much smaller. The materials they are made spatulas professional, high quality, are stainless steel, well tempered, varnished wooden handle. Having, however a wide range of materials such as plastic, silicone or even cardboard with which these tools are also made. The most suitable for painting with a spatula, should be rigid enough to withstand the pressure exerted on him to implement the pictorial material with the spatula. Thus we may speak mainly of wood and all derivatives thereof, DM, plywood, chipboard, etc.

We must take into account the fact that some colours, by chemical issues, can be affected by contact with steel, as it happens with Naples yellow or cobalt violet.

### Primers

Best professional primers are constructed of beech wood.

### Scrapers

They are available with different blade widths and are suitable for scraping, putty, coating substances, etc. While many painters also recently been included in the repertoire of tools used for painting.

### Mullers

The top mullers are marble, porphyry or crystal. It is an expensive tool, but if treated can last a long time. This tool is essential in the processes of grinding and mixing of the pigments and the preparation of the paint in all of the techniques.

## 2.4. PENCILS AND TYPES.

The history of the drawing pencil, are in the metal spikes that could be gold, silver, copper, lead, tin or various alloys, and were used on papers

prepared for this purpose. The chalky preparation of the paper base was to strengthen the line of the metal tip and simultaneously give the desired background colour.

The metallic tops, especially silver, were used by Durer, Holbein's, Leonardo and many others, in small format drawings.

The black stone from Italy, slate constitution and by Cennini Cennino came from Piedmont, could be cut with a knife to sharpen to the finest stroke (possibly it was a graphite ore in its natural state). It was used during the fifteenth to the eighteenth centuries. The pen (lápiz) name comes from the Latin lapis, meaning "stone". A primitive system consisted of a cord wrap that was rolling and as they spent the tip. We also used a metal handle as a pencil holder.

The graphite pencil is made today with this material, although at first the graphite (plumbago) was confused with lead. From there you can proceed with the misnomer of "lead pencil". The pencil first appeared in 1662 in Germany, but definitely was not imposed until the nineteenth century. The current pencil is made as thin bars, which are the mines, as more or less hardener mix (clay) in its manufacture; the pen will have certain hardness. It has established a universally accepted standards to distinguish the various gradations of pen, using the letter "B" to the soft and the "H" for hard, preceded by a number or ratio. As this increases, the degree of softness or hardness.

We reserve the letters "HB" or "F" for the average rating. So we can establish the classification of the table below.

Especialmente suave e intensamente negro	7B
Muy suave y negro	6B
Muy suave y negro	5B
Muy suave y muy negro	4B
Suave y muy negro	3B
Suave negro	2B
Suave	B
semisuave	HB
Semihard	F
Hard	H
Tougher	2H
More hard	3H
Notably hard	4H
Extremely hard	5H
Extremely very hard	6H

Rock hardness	7H
Steel hardness	8H
Diamond hardness	9H

Other pencils lesser category have not letters, if not just numbers: nº 1, nº 2, nº 3, nº 4, nº 5, nº 1 is always the softest.

The sanguine pencil, dark red, made of hematite (iron mineral) and, like graphite, is also presented in the form of bars.

The drawing charcoal, made by carbonization of softwood, free of resin. Some brands numbered the corresponding degree of hardness or softness.

Each person can make their own charcoal proceeding as follows: We choose branches that may be of willow, rosemary, heather, burning bush, walnut or hazelnut, must be clean, dry wood and free of bark, about the same thickness, and measuring 10 to 15 cm long, with pointed ends. They are grouped in bundles (ten to fifteen branches approximately), tied in the middle and at both ends with wire and introduced into a vessel of clay. It is filled with mud or clay all the spaces so that no air passes between the beams, and covered with the same clay or with a tightly fitting lid. Then placed in an oven or a wood stove or coal and cover the container with hot coals and ashes. After ten or twelve hours remove from the heat and let cool. If combustion has been slow, well charred and will be used. The Spindle is a wild bush French "fusain" called, in this language is called thereby drawing charcoals themselves.

The compound pencil, commonly called "charcoal pencil" or "pencil Paris", is made of a mixture of black smoke and clay, with three graduations. Give a precise line, black and fixed, rather than charcoal itself. It also comes in the form of bars.

The Clarion is a stick of chalk and clay, suitable to give highlights to the drawing, when the background is not white.

Colour pencils are a mixture of kaolin, wax and dye. Every day there are more varieties of these pencils.

Fasteners. Once the drawing, it is necessary to fix the charcoal or pen when is very soft. To this end the binders are used which are made to slightly coloured resin dissolved with a fast evaporating solvent.

For preparing a fixative may proceed as follows:

We part with a slightly colored resin and soluble in alcohol (the best in this case can be bleached shellac and mastic or dammar, and cheaper, rosin), dissolved in ethyl alcohol in a proportion very weak (at 2 or 3%) so that it is very fluid.

The fixative must be transparent and not in the least alter the color of the paper. Is applied by spraying, either by means of an appropriate tool for blowing or by an aerosol, always leaving a safe distance between the outlet of the liquid and the surface to fix, trying to spray perpendicular to the paper.

## **2.5. SPRAYERS.**

They are utensils that using different systems sprays paint from a container to any support. The first record of this technique is found in cave paintings, like those of Altamira. Through hollow bones or reeds, the artist sprayed diluted paint on the walls in which he was painting.

### Mouth sprayer

The mouth sprayer consists of two tubes open at both ends, of different thickness and perpendicular to each other. For use is inserted one end into the container containing the fluid or paint we want to spray. Then, blowing hard through the other tube, air pressure causes fluid to spray out of the tank containing it. They are usually used to apply fixatives to drawings made by the artist or simple spray paint.

### Hand Sprayers

Hand sprayer is based on the same principle as the mouth, but substituting the force of the lung by the air leaving the container by pressing. Another system, somewhat more complex, which activates a suction system after acting as a lever on a trigger, which generates the air force required to produce the spray. These sprays, generally used in landscaping, are the best.

### Aerosols

Aerosols are containers which have paints, varnishes or fixatives at an elevated pressure and when pressing a device, expel fluid through a valve. The main drawback of aerosols is that, inevitably, we will have to use a particular type of product because it cannot be refilled.



## 2.6. AIRBRUSH.

Despite the apparently homogeneous finish of the work done with an airbrush, it is possible to detect the personality of authors who have carved a very personal style using this particular tool. In among the highlights we can mention the Pop artists like Peter Phillips or Allen Jones. In the contemporary scene, we cannot overlook the Swiss Gottfried Helnwein or H. R. Giger who has achieved a truly unique style built on making just mastering the technique of spraying.

The spray guns are the tools best suited to all operations that require the application of spray paint or varnish. There are different types of airbrush and basically consist of the same parts. According to its technical complexity, performance and price, we can classify the airbrush into five types: single action airbrush and external mix, single action airbrush and internal mixing, fixed double action airbrush, airbrush independent double action and airbrush turbo.

At present, which give the best performance are double acting independently. It is the most professional airbrush. The operation of this type of spray guns is similar to the above with the difference that can be controlled with the same lever the stream of paint and air independently. Pressing the lever, control the air stream and, when you put it back, the stream of paint.

In the market there are a variety of models independent double action airbrush and they all have a common denominator, the ability to control completely and independently the amount of paint and the air stream. Within this type of airbrushes, we recommend VLC Paasche three hands and three heads for their versatility of line widths that allow him to illustrations in A4 and large format paintings. Similarly it is also highly recommended for its high resistance to shock and solvents including cleaning agents.

Keep in mind that to use an airbrush, whatever the type, you must have a source of pressurized air, and of these, only the compressor delivers the features needed for professional work. Professional compressors are also expensive and require maintenance and training for proper use.

### Accessories

Airbrush techniques, in addition to the airbrush, need a range of accessories, they will list the most important (not describing):

- Compressors or air tanks. Preferably silent as the refrigerator engines.
- Air hoses.
- Adapters.
- Spare needles.
- Specific tools for setting up and dismantling of airbrushes.
- Paint containers, preferably removable and top loading for easy cleaning and ergonomic mobility device.
- Supplies and products for cleaning airbrushes.

### Maskered and reserves

At the airbrush painting we work with both the ability of the stroke of the hand holding the airbrush as the domain of the opposite hand should be placed masking and templates. In that sense, when it comes to large-scale works, we recommend the use of templates natural cork agglomerate, as well absorbed painting. Thus it is possible to reuse the templates almost immediately, while allowing them into a very good condition due to be repaired easily (by sanding or cutting with cutter) When work is much reduced format, degree of Masked accuracy increases with what is necessary to use masking tapes, although it is also possible to use transparent adhesive plastic that allow a very large control over the surfaces to be masked.

### Safety measures

It is very dangerous to the lungs to accumulate deposits of acrylic or pigment, so be sure to always wear protective clothing, mask and a respirator when using an airbrush or spray gun. Keep safety equipment until after you have finished working and toxic particles remain suspended in the air. It is also desirable to protect the eyes and skin as paint spray easily penetrates the epidermis. Ideally, in addition to the mask, using long clothing, gloves and goggles. Similarly you should work with the best ventilation possible; in that sense it would be best to have a workshop with water spray to prevent accumulations of paint precisely in suspension.

## **2.7. OTHER TOOLS.**

The rollers are other tools used for painting. They have different sizes and are made of various materials, can be rubber, foam rubber, wool (lambskin or goat), short fiber nylon, etc. The rollers are preferably used for regular surfaces with solid colors.

The sponge like utensil can sometimes be as useful as the brush itself, especially in procedures to water. And as the types of hair, bristles, etc. the best are the natural been possible to use the artificial, qualities related to those of the first, for the same purpose and similar results. We also have *mops* and *rags* with similar applications to those that can give us the sponges, although the latter should be used to dry and clean both brushes and palettes.

The touch, more common in former times, served to support the hand that painted, while holding the other, to have more security and pulse. Today it has almost lost its use, although sometimes in specific circumstances, we have to improvise it as possible.

Masking tape or bodybuilder will be very useful for precision work when we need to protect certain areas, or drawing straight lines, both freehand and supported by touch, we would be extremely difficult to perform.

### Palettes

They are used for painting in a more or less regularly way since the XV century, although its form, color and material have stranded a lot since then. To the XIX century became fashionable large palettes, oval or kidney-shaped, with a hole for the thumb. Prior to use they were treated with linseed oil to prevent the absorption of the excess of oils that were to be deposited. Today the palettes are covered by polyurethane varnishes or coating of cellulose. As for color palettes, it is common to find wooden pallets in mahogany. I personally do not recommend its use as currently it is not often that the student works on an ocher as before, we recommend white palette plus a little porous materials and easy to clean as melamine or other types of plastics. In any case the color palette has much to do with the color of the base of support on which is intended painting.

## **2.1. BIBLIOGRAPHY AND WEB LINKS.**

### WEB LINKS.

Here you can find emergent artists' interviews on the techniques and procedures they use and how they use them with beautiful descriptions of its plastic characteristics. [Accessed: February 9, 2012]. Available at:

<http://thetoolsartistsuse.com/>

Acrylic paint, Media for texturing, painting brackets, painting tools, painting techniques, gouache, pastels, miscellaneous.[Accessed: February 9, 2012]. Available at:

<http://www.artistterms.com/canvas.htm>