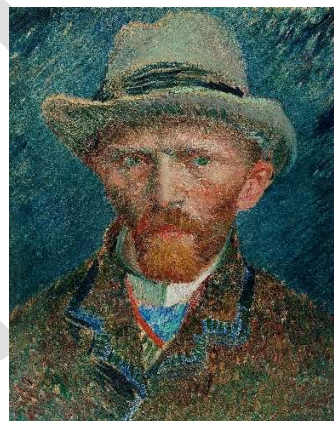


Chapter 4

Paints

Bearing in mind that Vincent van Gogh probably used only 8 - 10 different paint colors, why do we have PBN templates that use 36 or more colors? The answer is that van Gogh, and others like him, mixed their own colors from a limited **color palette** (a term used to describe the actual paints used to paint a picture). The PBN supplier has done all the mixing work for us.

Bearing in mind that you have different versions of basic colors, you need to be specific about what exactly you want. In the same way that you can't go into Starbucks and ask for a simple coffee, you can't go into an art shop and ask for blue paint. The last time I looked there were nine different types of blue paint to choose from.



Mixing paint requires some degree of skill and practice. Fortunately, PBN suppliers have given us all the paints we need with no need for any color mixing – unless you run out of paint and want to mix your own. Color mixing is covered in Chapter 5 – Simple Color Theory.

Some Information on Paints

Traditional Artist Paints

When we talk about artist-quality paint—not paint-by-numbers (PBN) paints—we're referring to paints made with specific pigments. Each paint has a name and a corresponding color. For example, Phthalo Blue is a distinct shade of blue created using a specific pigment. Similarly, Prussian Blue is another blue paint but made with a different pigment.

Pigments are typically manufactured through industrial processes and give paints their color. Some, like cadmium-based pigments (Cadmium Red and Cadmium Yellow), produce extremely vibrant colors but are also highly toxic.

If a paint's name includes the word *hue*—such as Cadmium Red Hue or Cadmium Yellow Hue—it means the pigment is an artificial substitute rather than the original toxic version. 'Hue' paints mimic the original colors but are safer to use.

Additionally, the word *hue* is often used in a more general sense to describe a color, such as ‘a red hue’ or ‘a blue hue.’

Paints with the same name from different manufacturers are not always identical. There can be slight color variations that only an experienced eye would notice.

Watercolor, Acrylic, and Oil Paints

As the name implies, watercolor paints are designed to be used with water. You paint with water and then apply the paint; weird and wonderful things can happen as the paint spreads through the water. Watercolor paints can be used as an underpaint (see Chapter 7 for information on underpainting) for either acrylic or oil paints. Allow underpaint to dry fully before applying other paints.

All paint, regardless of type, is made of pigment that is held in a binder of some sort.

Acrylic paint is pigment held in a chemical emulsion with a thickening agent such as corn starch or flour. Acrylic paint can be thinned with water, or with some of the gels made to change the properties of acrylic paint. Unmodified acrylic paint dries and cures in about 10 – 60 minutes, depending on the paint thickness. *Curing* is a chemical reaction that occurs after drying, causing the paint molecules to link together and form a strong, durable, and hardened coating.

Oil paint consists of pigment held in a drying oil such as linseed oil, safflower oil or poppy oil. These oils have their own properties and can modify the color slightly. There are enhancing agents for oil paints that can change the properties of oil paints; **Liquin**, for instance, reduces the drying time of oil paint.

Water-based oil paint, also known as water-mixable oil paint, is a type of oil paint that can be thinned and cleaned with water. It's made by adding an emulsifier to a drying oil base so that it mixes with water to create a stable solution. You cannot mix water-based oil paint with the more traditional oil-based paints. Water based oil paints are easier and safer to use than traditional paints, don't require solvents, and are easier to clean up.

Transparency and Opaqueness

Regardless of whether the paint is acrylic or oil, paint can be transparent, opaque, or translucent. Most traditional paint tubes have a small square somewhere on them that identifies its transparency:

- If the square is white or the same color as the tube (as on the right), the paint is transparent.
- If the square is black, the paint is opaque.
- If the square is half black and half white, the paint is translucent.

A paint's transparency is determined by the pigment in the paint and how thickly the paint is applied.

Phthalo Blue, Indian Yellow, and Alizarin Crimson, for instance, are transparent paints. Titanium White, most blacks, Cadmium Yellow, and Bright Red are opaque.



Zinc White, sometimes called Mixing White, is translucent. Visit the web sites of artist paint suppliers to get a full list of paints and their properties.

Mixing transparent paints results in the new color remaining transparent. If you mix a transparent and opaque paint, the resulting color is usually opaque. If the numbers or lines of the PBN cells are showing through the paint, mix a little bit of Titanium White with the PBN paint.

Tints, Tones, and Shades

A **tint** of a color is the color with a little white added to it to lighten it. A **tone** is the color with a little grey added to it, and a **shade** is the color with a little black added to it. Black, grey, and white are neutral colors. Adding neutral colors to a paint reduces the color intensity of that paint. Adding a little white paint to a transparent color lightens the color slightly but makes it more opaque – ideal for covering cell numbers on a PBN canvas.

To darken a paint, you can either add a little black (though this tends to grey a paint and not darken it), or you can add a little paint on the opposite side of the color wheel (see Chapter 5 – Simple Color Theory). Darkening or lightening a paint causes a shift in color and to reverse that slight shift in color, add a little bit of a color on the adjacent side of the color wheel. Adding white to red for instance will cause a slight shift towards blue which is on the left of red on the color wheel below, add a tiny bit of orange (which is on the right of red on the color wheel) shifts the red and white mix back towards red by cancelling out the blue. You will find an example of a color wheel in Chapter 5.

Don't get too concerned about this; it's color theory and is for your general information.

PBN Paints

If your PBN set is a complex one, you might be required mix two colors to make a third. Included are instructions on how to mix them. For example, the instructions might say, "2 parts of color 12 and 1 part of color 15 to make color 36". Despite what the directions say about proportions (in this case, 2 parts to 1 part), always start with a blob of the lightest color and add a tiny bit of the darker color a little at a time. Some colors (such as blue) are very strong, and too much of that color will overwhelm the other color. You will probably have a proper color chart included in any set that requires you to mix paints, and you will be able to compare your mixed color with this color chart

Each PBN artwork has its own color chart ranging from 8 colors through to 48 or more, depending on the number of paints you need. It might just be a numbered list, but it is still a color chart. If you look at the colors supplied, especially with the sets with more colors, you'll see a small number of base colors but of different shades – some are a little darker and some are a little lighter.

To learn more about the subjects covered in this chapter, go to Chapter 4 of:

<https://paintingbynumbersbooks.com/apbnt/>