Layer Blending Modes

Blend Modes can be used to tell layers how to interact with layers beneath them in different ways. By setting Blend Modes you can make paint darken paint below, tint it, or otherwise adjust it. ArtRage provides a number of Blend Modes, including the standard ones from Adobe Photoshop and some of its own.

The default Blend Mode applied to each Layer is “Normal”, which means that paint will sit on top of paint on the layer beneath and cover it like normal paint on a surface.

To use layer blend modes you have to have two or more layers. The blend mode will react with the layer below it.

For this tutorial I will be using an image with two layers. The blending mode will be applied to the top layer and we'll look at the way they both interact.

The background layer is a picture I took on a holiday in one of my favourite places in Belgium. The one I will use for the layer modes is made of some grayscale and colour samples.
The tint mode takes the color of the paint on your layer and tints the paint underneath it. In this example the blue sample has applied a blue tint to the Photo beneath. Use this mode if you want to apply color to something in gray scale, or tint the color below with a new color above.

The highlight blend lightens paint beneath it, allowing you to make paint brighter by applying paint above it without washing it out to plain white. The darkest (black) sample leaves the original picture intact. The lightest gives a white effect to our photo.

The shadow mode darkens paint beneath it, allowing you to make subtle adjustments to the shading of paint from a layer above. The lightest (white) sample leaves the picture intact, the darker we go, the darker the picture gets.
**WATERCOLOR:**
The Watercolor mode is an interesting one because it's specific to ArtRage. It blends a Multiply style blend with a normal blend depending on the density of the pigment. So translucent pigments become multiplicative as light is transferred through them, but as the pigment becomes less translucent it starts to override the colour beneath. You should see the look of the blend change as you reduce the opacity of the layer, for example.

**DISSOLVE:**
The edge of our picture gets a rough edge. This mode randomly replaces colors of some pixels on the selected layer, with those of the underlying layer to create a speckled effect. The selected layer's opacity determines the number of pixels replaced: the lower the opacity, the more pixels that are replaced.

**DARKEN:**
Darken compares each pixel value of the upper layer to its counterpart's pixel value of the lower layer and chooses the darker of the two to display. Pixels lighter than the underlying layers disappear.

**MULTIPLY:**
Multiply darkens the lower layer based on the darkness of the upper layer. No part of the image will get lighter. Any applied tone darker than white darkens the lower layer. White becomes transparent. Multiplying any color with white leaves the color unchanged.
Color Burn:
Color Burn burns in the color of the upper layer with the lower layer. No part of the image will get lighter, white leaves the picture unchanged.

Linear Burn:
Linear Burn works like multiply but the results are more intense.

Lighten:
Lighten compares the two layers pixel for pixel and uses the lightest pixel value. No part of the image gets darker. The black sample becomes transparent, and does not alter the image.

Screen:
Screen brightens by lightning the lower layer, based on the lightness of the upper layer. The result is always lighter, and makes it a good mode for correcting exposure in photos that are too dark. The black sample leaves the photo intact.
COLOR DODGE:

Color Dodge dodges the lower layer with the upper layer, resulting in a lighter image. No part of the image will be darkened. The white sample produces the most lightening, the black sample has no effect.

LINEAR DODGE:

Linear Dodge works like screen but with more intense results.

OVERLAY:

Combines the Multiply and Screen blend modes. If the color channel value of underlying layers is less than half the maximum value, the Multiply blend mode is used. If the color channel value is greater than or equal to half the value, the Screen blend mode is used.

SOFT LIGHT:

Soft Light will multiply the dark tones and screen the light tones. It is a combination of the Burn and Dodge-blend modes. In general, use the Soft Light blend mode to add soft highlights or shadows.
HARD LIGHT:

Hard Light multiplies the dark colors and screens the light colors. It is a combination of the Multiply and Screen blend modes. In general, use the Hard Light blend mode to add highlights or shadows.

VIVID LIGHT:

Vivid Light will dodge or burn the underlying layer pixels depending on whether the top layer pixels are brighter or darker than neutral grey. It works on the contrast of the lower layer. The mid-range of the grey tones leaves the photo intact.

LINEAR LIGHT:

Linear Light is the same as Vivid light but it works on the brightness of the lower layer. Again, the mid-range of the grey values leaves the photo intact.

PIN LIGHT:

Pin Light changes the lower layer pixels depending on how bright the pixels are in the upper layer. It acts like Multiply when the upper layer color is darker than neutral grey, and acts like Screen if the upper layer color is lighter than neutral grey.
HARD MIX:
This blend mode is a combination of the Vivid Light mode and a posterization effect (i.e., where the image appears more pixelated). It will posterize the bottom layer pixels through the blend layer and recolor the image using the specifications of the Vivid Light mode. A higher Fill Opacity on the top layer will increase the posterization effect on the image. In the example, the Fill Opacity is set at 100%.

DIFFERENCE:
Difference reacts to the differences between the upper and lower layer pixels. Large differences lighten the color, and small differences darken the color.

EXCLUSION:
Creates an effect similar to but softer than the Difference blend mode.

HUE:
Hue changes the hue of the lower layer to the hue of the upper layer without changing the brightness and the saturation.
SATURATION:

Saturation changes the saturation of the lower layer to the hue of the upper layer without making changes to the brightness and hue of our photo.

COLOR:

Color changes the hue and saturation of the lower layer to the hue and saturation of the upper layer but leaves luminosity unchanged.

LUMINOSITY:

Luminosity changes the luminosity of the lower layer to the luminosity of the upper layer while leaving hue and saturation the same.