

Leonardo da Vinci coined the term **aerial perspective** in his *Treatise on Painting*, writing: “Colours become weaker in proportion to their distance from the person who is looking at them”. Later it has been discovered that this effect is caused by light scattering as it encounters moisture and microscopic particles in the atmosphere, giving rise to the term **atmospheric perspective**.

What we refer to as colour in daily language is made up of three components: **Hue, value** and **saturation**. **Hue** is where the colour is placed on the colour wheel, or a representation of its dominant wavelength or pigment. When we call a hue yellow, we’re saying the dominant wavelength is yellow light. When we call another hue cobalt blue, we’re it’s made with the blue pigment derived from cobalt.

Value in art terms is how light or dark a colour is. We can add white to create lighter **tints**, or black to create darker **shades** of the same hue. The grayscale, from pure white to pure black, with shades of grey in between is a pure **tonal value** scale. We may assign different names to different values, (baby blue, light blue, blue, dark blue) but they are still variations of the same hue. **Saturation** refers to the intensity of the colour. When we use watercolours we change the **saturation** by adding more or less water to our pigment. If we’re using tempera or acrylic paints we would change the saturation by adding more or less of a single tone from the tonal value scale.

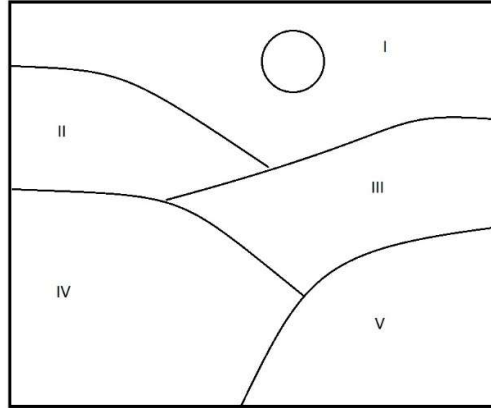
In art we can create the illusion of depth by observing the principle written down by Leonardo da Vinci. In a monochromatic painting we adjust the **value** and/or the **saturation** of our single colour, letting our landscape fade and blur towards the horizon and become more detailed and intense the closer to the foreground we get.

In this project we explore atmospheric perspective by painting landscapes with different saturations of coffee on watercolour paper.

Painting with coffee

You will need:

Watercolour paper
Cardboard
Painter's tape or washi tape
Pencil
Paintbrush
Measuring spoons
Small cup or bowl
Water
Instant coffee



1. Tape your watercolour paper to cardboard using a low tack tape. This will prevent the paper from curling, and provide you with those fancy white edges.
2. Using the pencil very lightly, divide the paper into five sections. If you want to, add a sun or moon into the topmost section. This is the sky.
3. Measure 1 tablespoon of water into your cup and add a pinch of instant coffee. Mix well with your paintbrush until all coffee is dissolved.
4. Remove excess coffee from paintbrush by drawing it over the edge of your cup. Paint your topmost section (I) with a single layer of this very pale liquid. Leave the sun or moon white.
5. Add $\frac{1}{4}$ teaspoon instant coffee to your cup and mix to dissolve.
6. When the sky is dry or very nearly dry, paint in the next section (II) with this coffee solution. Again, removing excess coffee from the brush against the edge of the cup. This is the section of your landscape that is the furthest away. If you want any trees or other features in this section, add them now.
7. Add $\frac{1}{4}$ teaspoon instant coffee to your cup and mix to dissolve.
8. When the previous section is dry or very nearly dry, paint in the next section (III) with this coffee solution. Again, removing excess coffee from the brush against the edge of the cup. If you want any trees or other features in this section, add them now.
9. Add $\frac{1}{2}$ teaspoon instant coffee to your cup and mix to dissolve.
10. When the previous section is dry or very nearly dry, paint in the next section (IV) with this coffee solution. Again, removing excess coffee from the brush against the edge of the cup. If you want any trees or other features in this section, add them now.
11. Add $\frac{3}{4}$ teaspoon instant coffee to your cup and mix to dissolve.
12. When the previous section is dry or very nearly dry, paint in the next section (V) with this coffee solution. Again, removing excess coffee from the brush against the edge of the cup. If you want any trees or other features in this section, add them now.
13. Let your painting dry overnight, still taped to the board. If it's not completely dry leave it longer.
14. To remove the tape carefully peel off one corner, then **slowly** pull it at an angle away from your artwork, parallel to the board. See image.

