



The  
official  
Magazine  
of the  
Artworkz  
Photo  
Group

epic  
ARTWORKZ

Colour

- DAVID & DEBBIE HIBBERT -



GET UP  
GET OUT  
GET EXPLORING

# Colour

- David & Debbie Hibbert -

Colour makes our world more exciting,  
magical and beautiful to behold.  
This small photographic gallery  
showcases colour and includes  
some interesting facts.

# CONTENTS

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# COLOUR

Colour (color in America) is a characteristic of light by which we are made aware of colourful objects or light sources. This occurs after light has reflected from a surface or transmitted from a light source such as a globe. Light and Colour is perceived by receptors found in our eyes.



# HUE

Hue is a term used to describe dominant colour families. In painting, a hue is the pure colour without tint, tone or shade. White, black and grey are never referred to as a hue. Colour on the other hand is a global term used to describe all colours, hues, tints, tones and shades.



# SATURATION

Saturation is a term used to describe the purity or intensity of a colour. It refers to the light intensity of a colour and its distribution across a spectrum of different wavelengths. The smaller the number of wavelengths, the more saturated (pure) the colour is.



FRENCH TOAST



# ARTIFICIAL

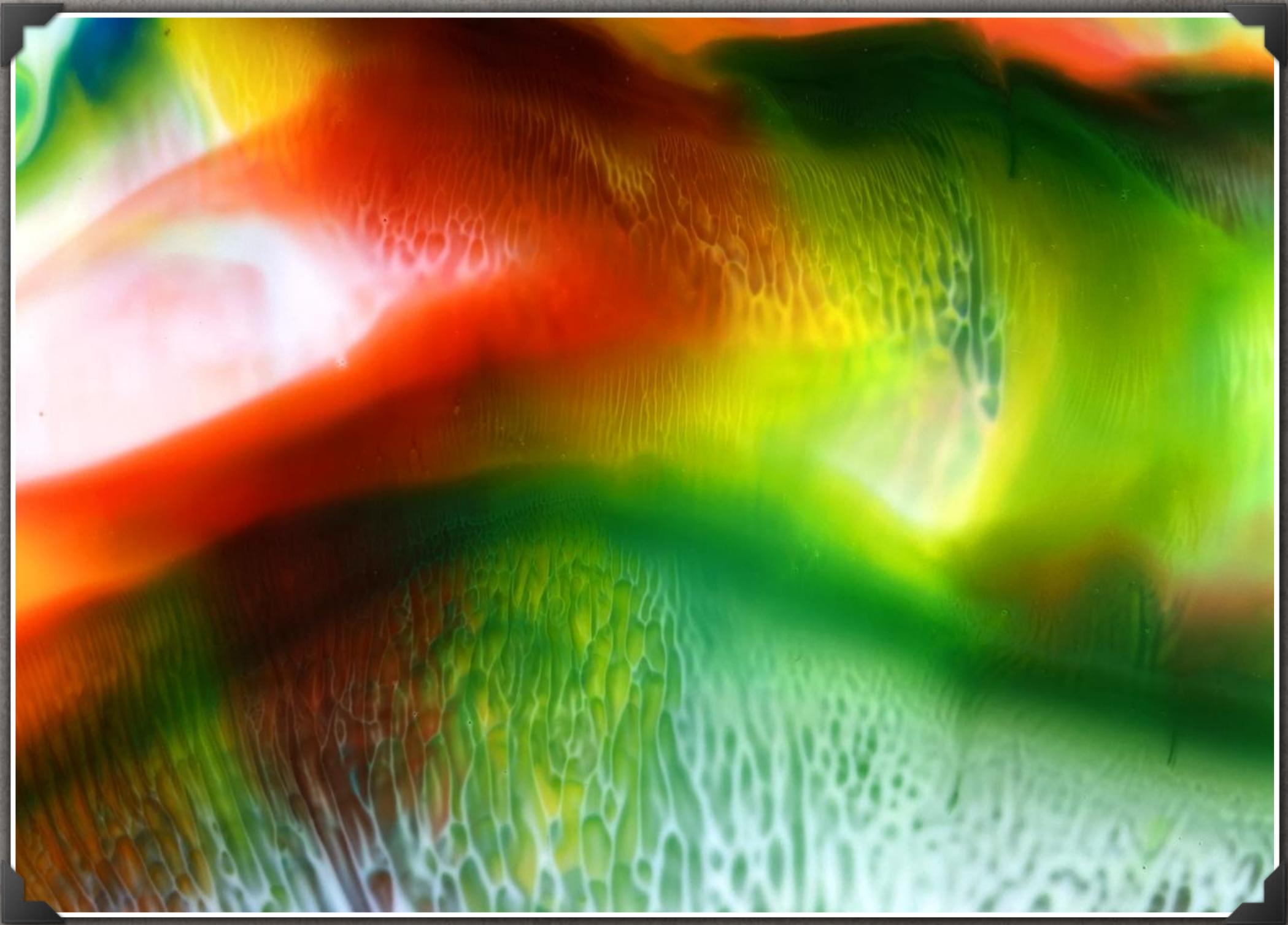
Artificial Colours Made by Man



FIRE WORKS



FOOD DYE IN MILK

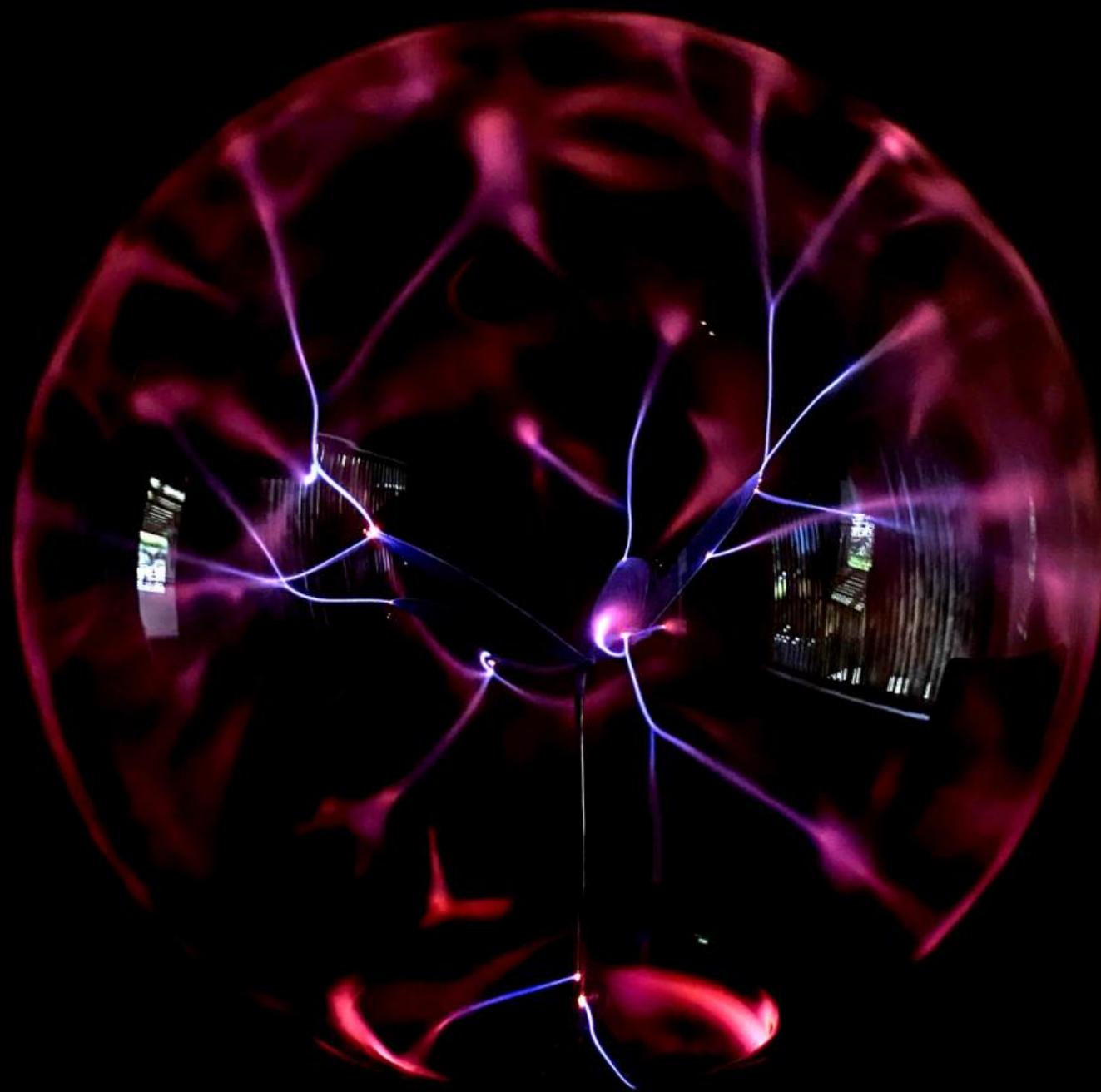


Drops of food dye in milk modified by drops of detergent

FOUNTAIN LIGHTS



PLASMA GLOBE





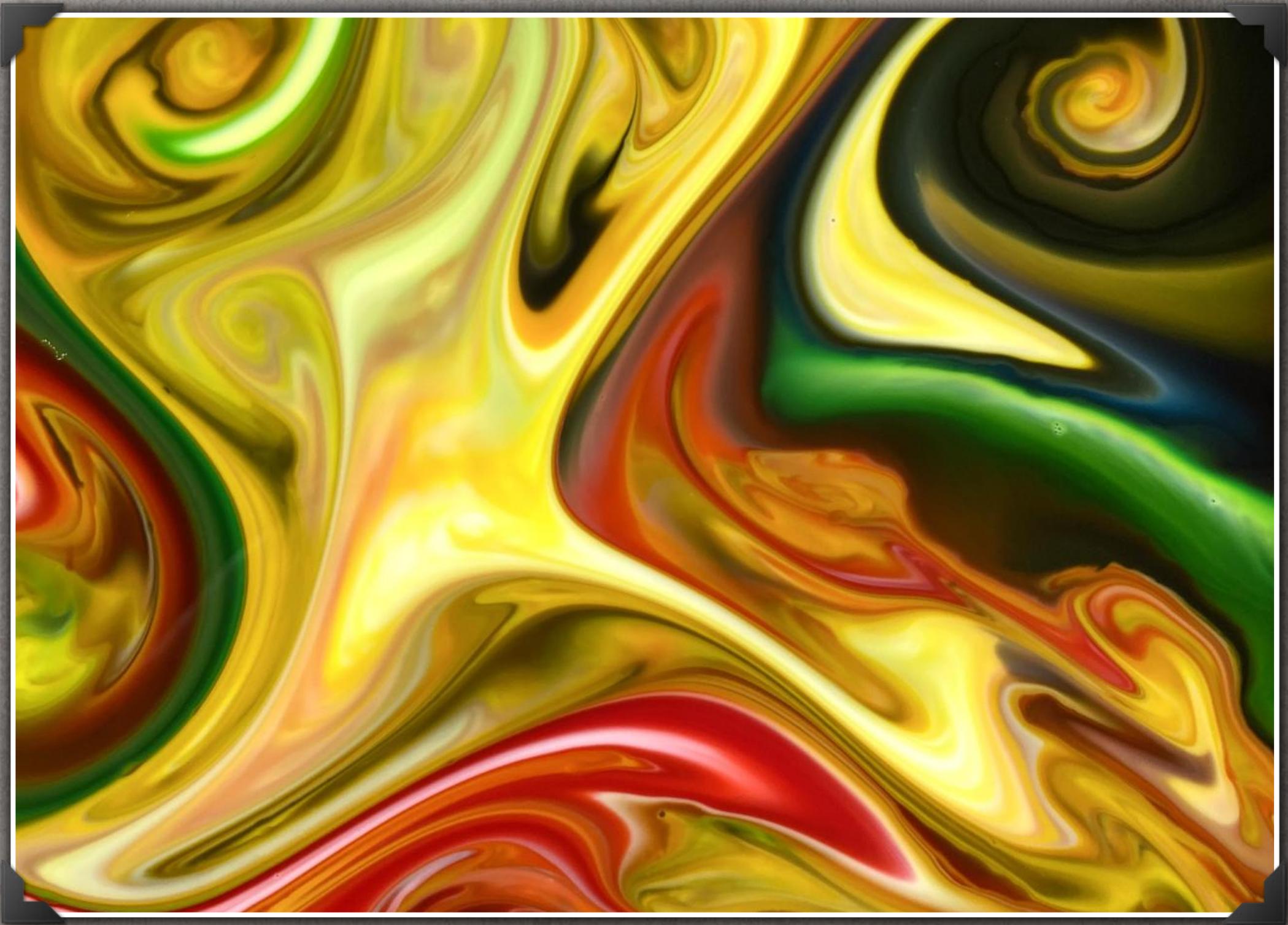








FOOD DYE IN MILK



Drops of food dye in milk modified by drops of detergent and swirled





BIRD SCULPTURE



CITY LIGHTS



POWERLINE SILHOUETTE

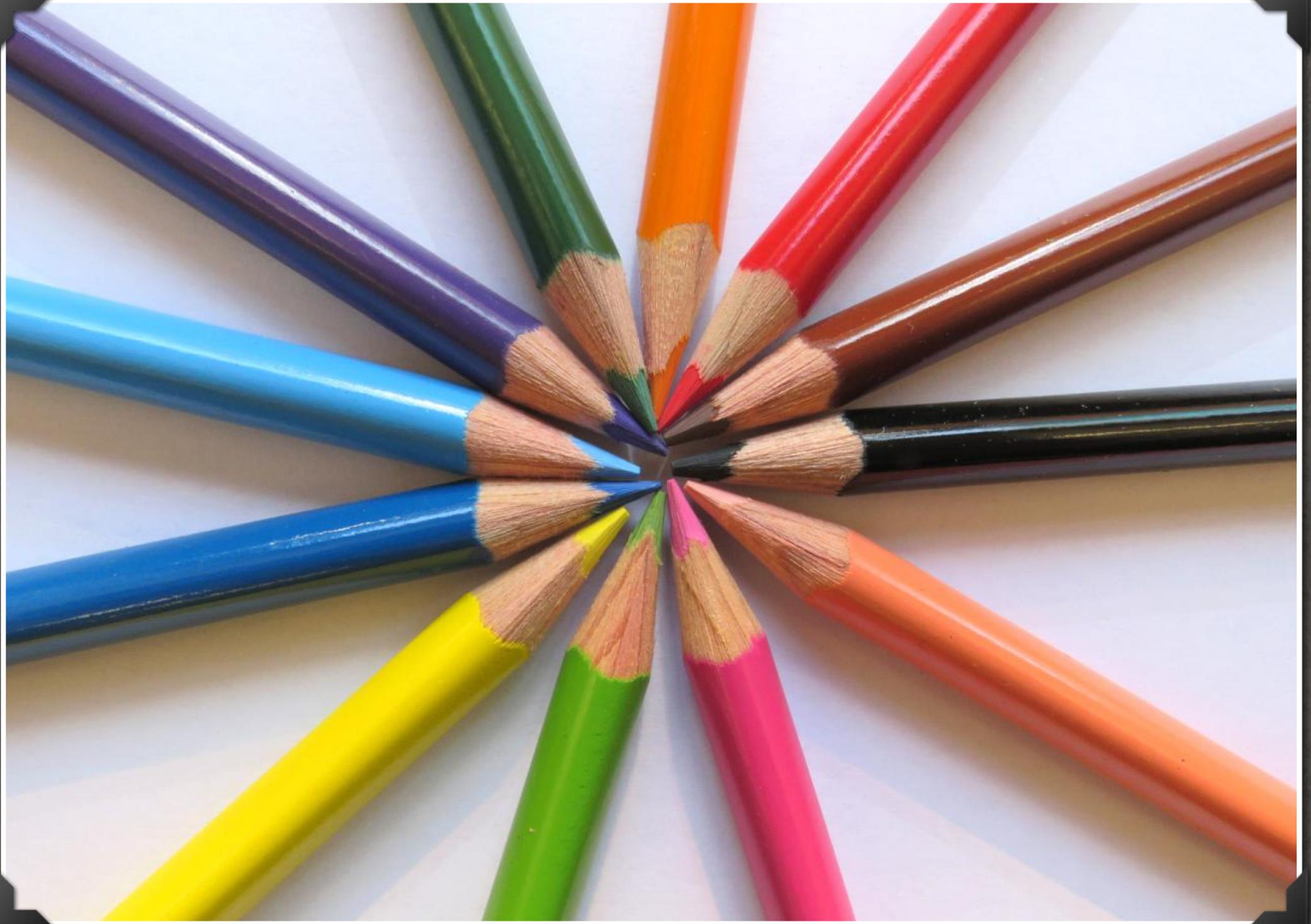


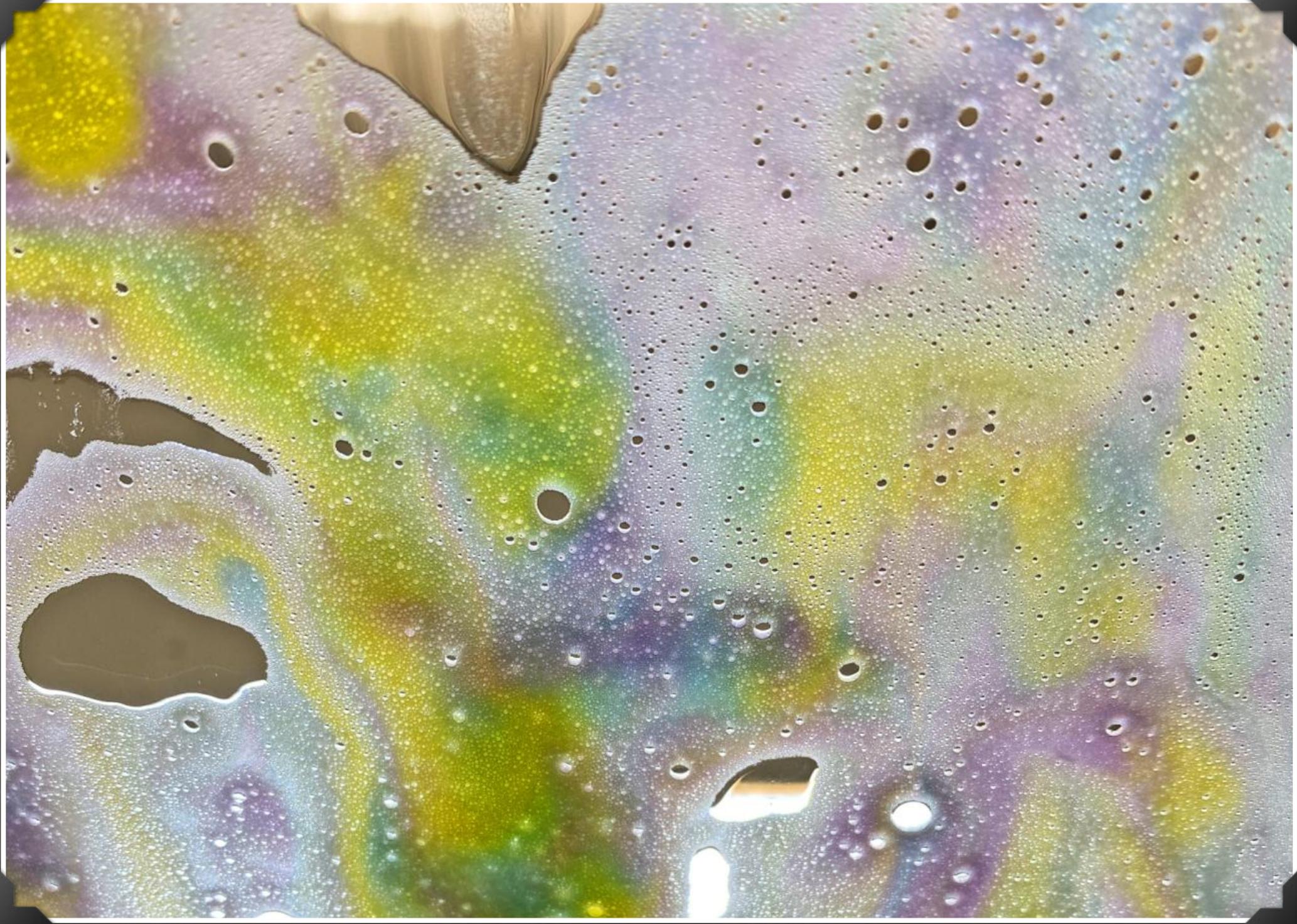


COLOURED MATCH STICKS



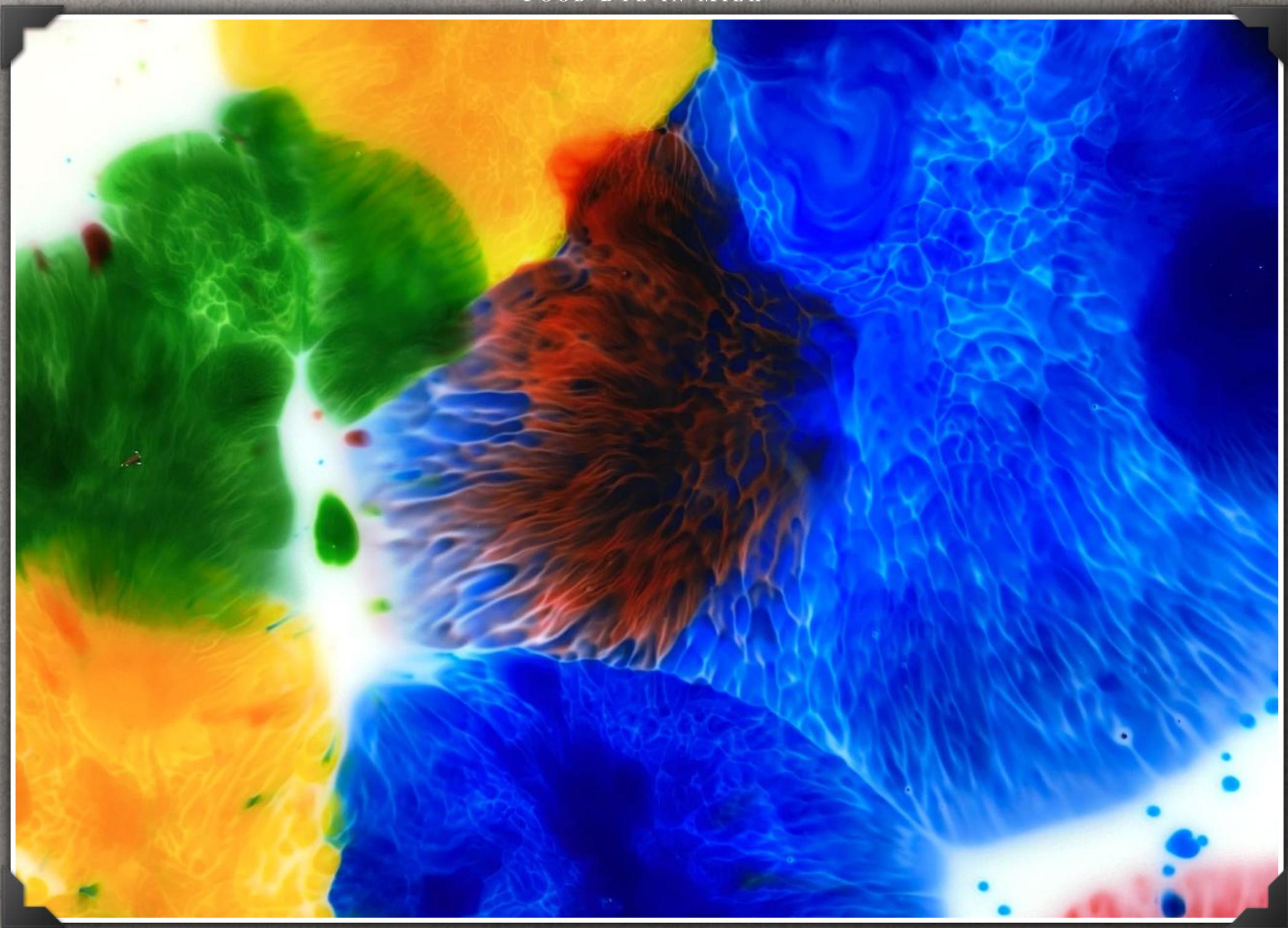
PENCILS







FOOD DYE IN MILK



Drops of food dye in milk modified by drops of detergent



# ARTISTRY

Colours in Art



TUBES OF COLOURED PAINT



DISCARDED OIL PAINTS



# COLOUR WHEEL

A round chart showing hues (primary colours), as well as secondary colours and tertiary colours in an easy to understand illustration. Colour wheels break colour up into various groups and are often used in artistry and publishing as they can help us select the best colours for our talk.



## BASIC RGB ADDITIVE COLOUR WHEEL

Useful for creating digital arts for display on screens

Also known as colour circles, they are a tool for helping artists and publishers to understand colour and select the best colours for their works. There are many different types of illustrations used to show relationships between colours. This chart is one of the more basic and is universally accepted by artists and publishers.

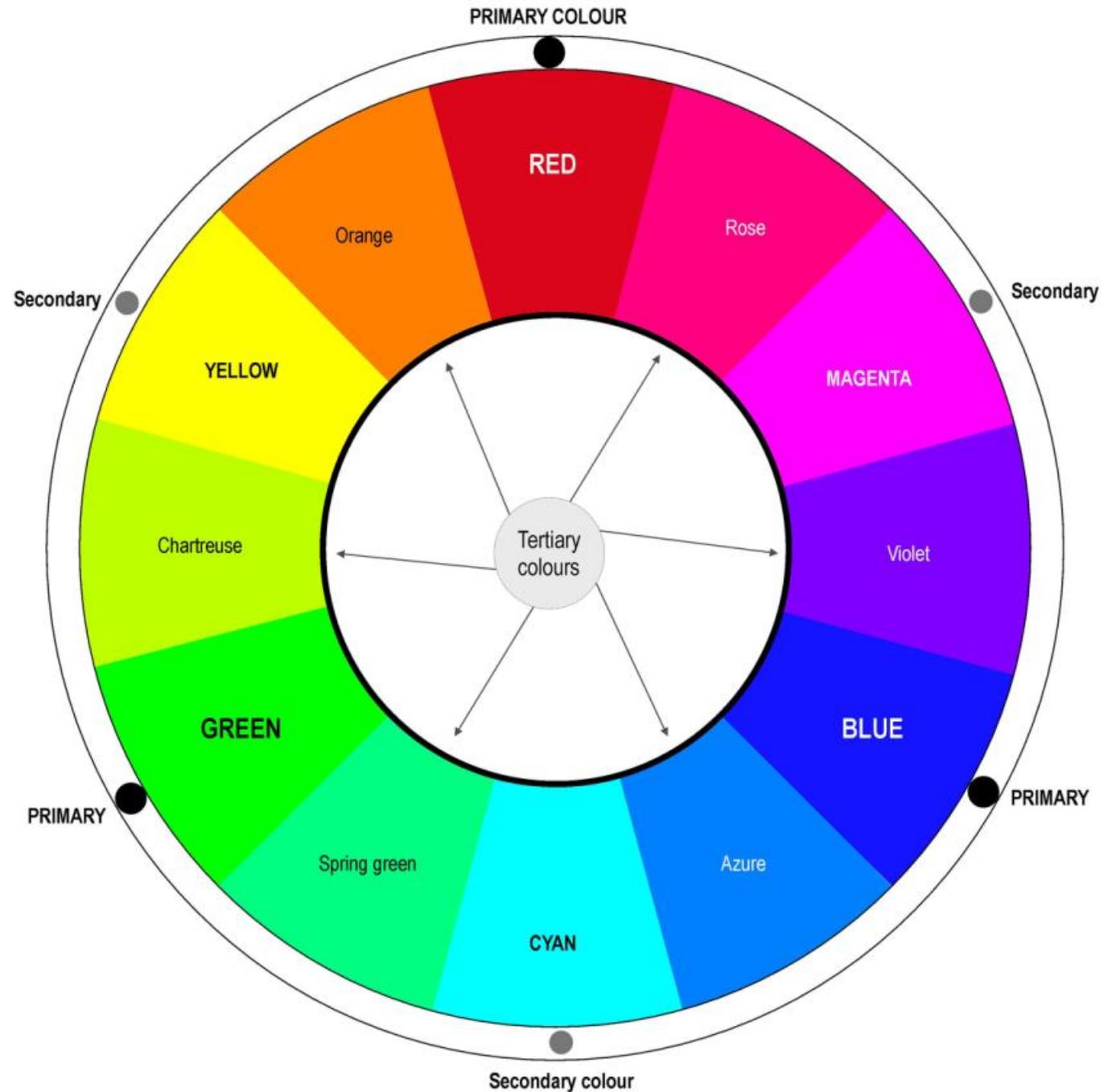
Colour wheels break colour up into various different groups, such as primary colours (hues), secondary colours and tertiary colours. Primary colours are colours that cannot be made by mixing other colours, but can be mixed to make all other colours. For instance mixing red and blue will make the secondary colour magenta. Mixing a primary colour with a secondary colour will create tertiary colours.

Additive wheels such as this one have the primary colours **red**, **blue** and **green (RBG)** equally spaced around the circle.

Secondary (adjoining) colours are **magenta**, **cyan** and **yellow**. Tertiary colours are rose, violet, azure, spring green, chartreuse and orange.

Complimentary colours are colours that are opposite each other on the colour wheel. When used together they will appear most vibrant. This can be done for dramatic effect. Using colours found on the wheel next to each other can be used to create artistic works that are more subtle to the human eye.

*Don't be afraid to try different colour combinations and have fun with your creative works.*



## TINT, TONE & SHADE

Understanding the difference

There are more colours available for use than those few pure and fully saturated colours (hues) found on the edge of colour wheels. Further colour variation is achieved through the use of tints, tones and shades (often referred to as TTS).

### Tints

Tints are created when you add white to a hue. For instance adding white to violet creates light pink. Adding white to orange creates peach. These are often likened to the watercolour colours.

### Tones

Tones are created when you add grey to a hue. These colours are more unsaturated and considered duller.

### Shades

Shades are created when you add black to a hue. This can make the colour darker, richer and create moodiness.

Hues, tints, tones and shades are all valid colours and a seasoned artist is able to create and use them without the use of a colour wheel or TTS chart, due to their knowledge and experience. However using charts such as this one can help artists better visualise where they are taking their creative work.

# ORIGINAL HUE

Tints, tones and shades are created by adding white, grey or black to hues, as seen below.

Any primary, secondary or tertiary colour can have this process applied to them.

By adding  
white to this  
hue, you  
create tints

TINT 1

TINT 2

TINT 3

TINT 4

By adding  
grey to this  
hue, you  
create tones

TONE 1

TONE 2

TONE 3

TONE 4

By adding  
black to this  
hue, you  
create shades

SHADE 1

SHADE 2

SHADE 3

SHADE 4

ABORIGINAL ROCK ART PAINTED IN NATURAL OCHRE - AUSTRALIA'S FIRST ART FORM



Shown with respect and honouring the first inhabitants of our land and their creative abilities using natural pigments and wetting agents





RIVER SCENE PAINTED IN PASTELS

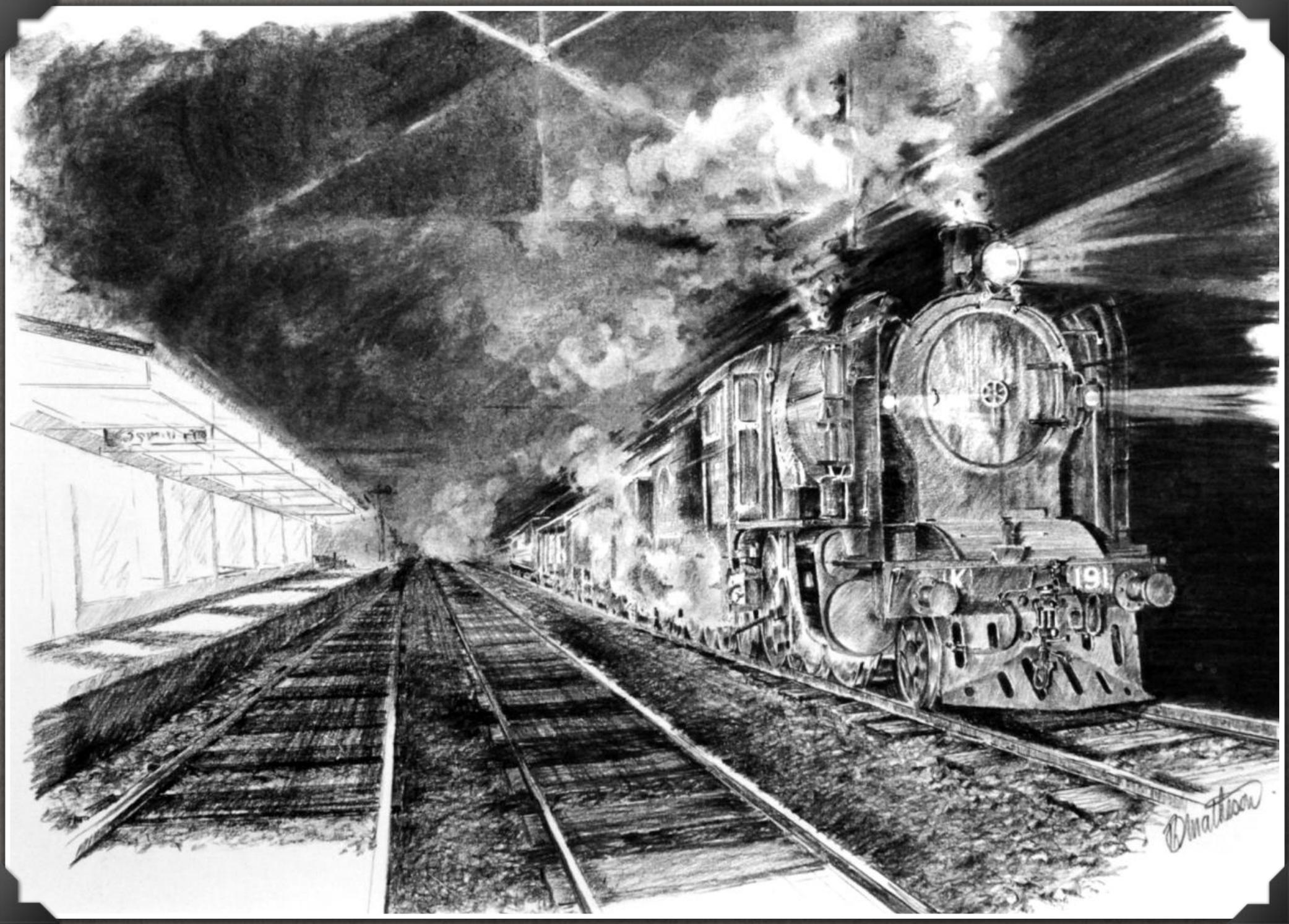


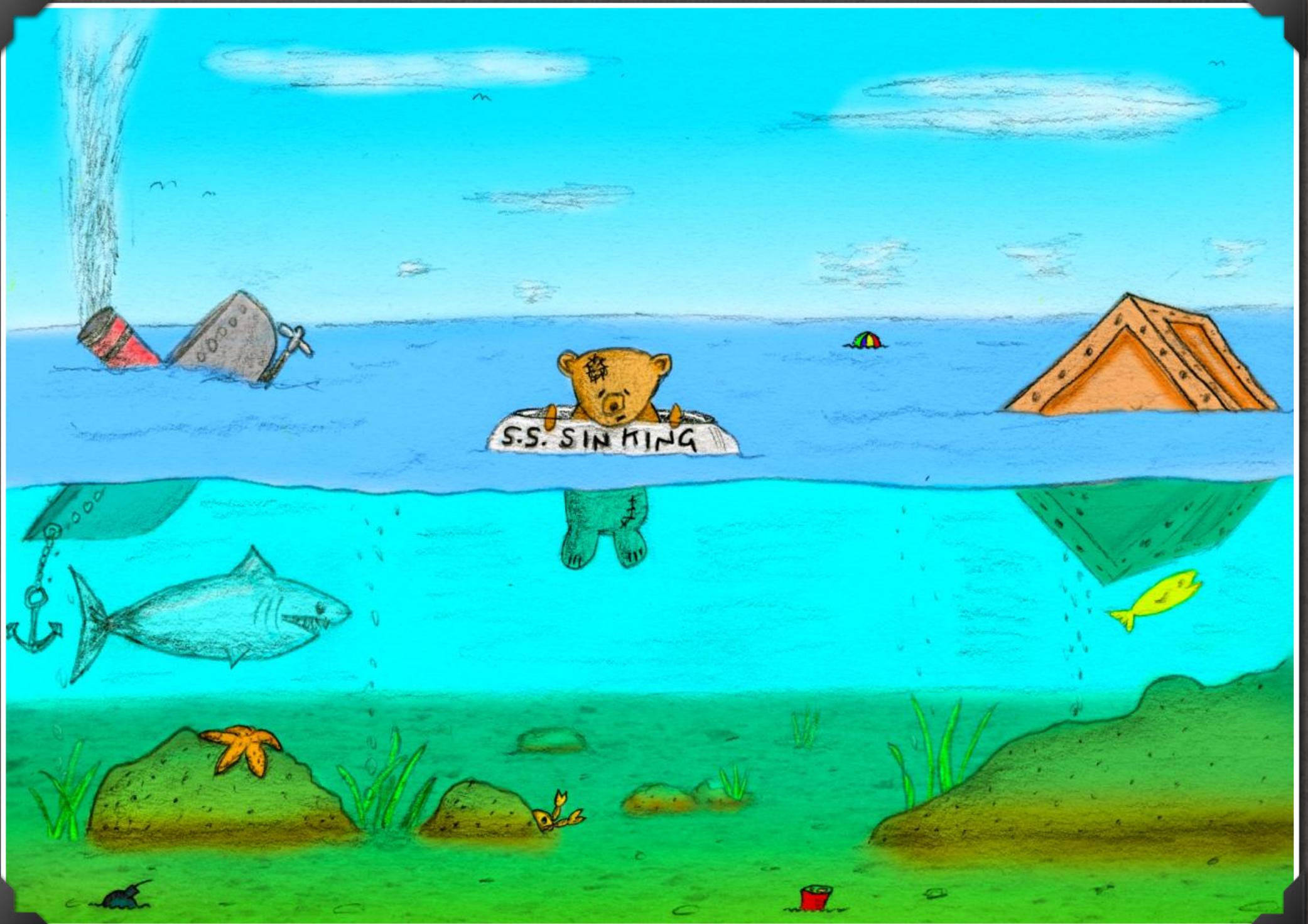
DRAY SCENE PAINTED IN CONTE PENCIL



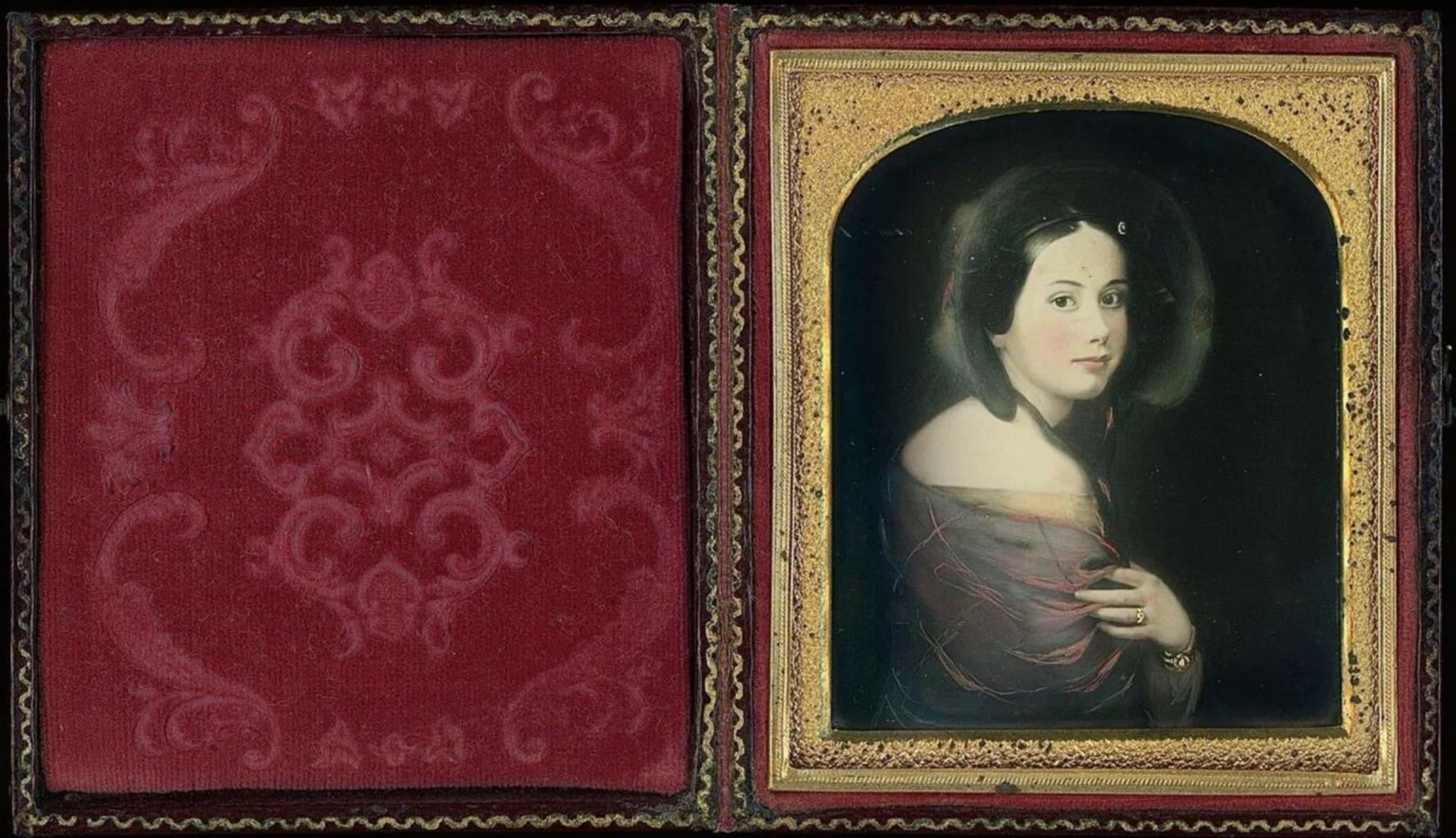
*Peter Matheson*

TRAIN SCENE PAINTED IN CHARCOAL





VERY EARLY HAND COLOURISED DAGUERRETYPE PHOTOGRAPH IN A DISPLAY BOX



The first publically available photographic process, invented by Louis-Jacques-Mandé Daguerre and introduced worldwide in 1839



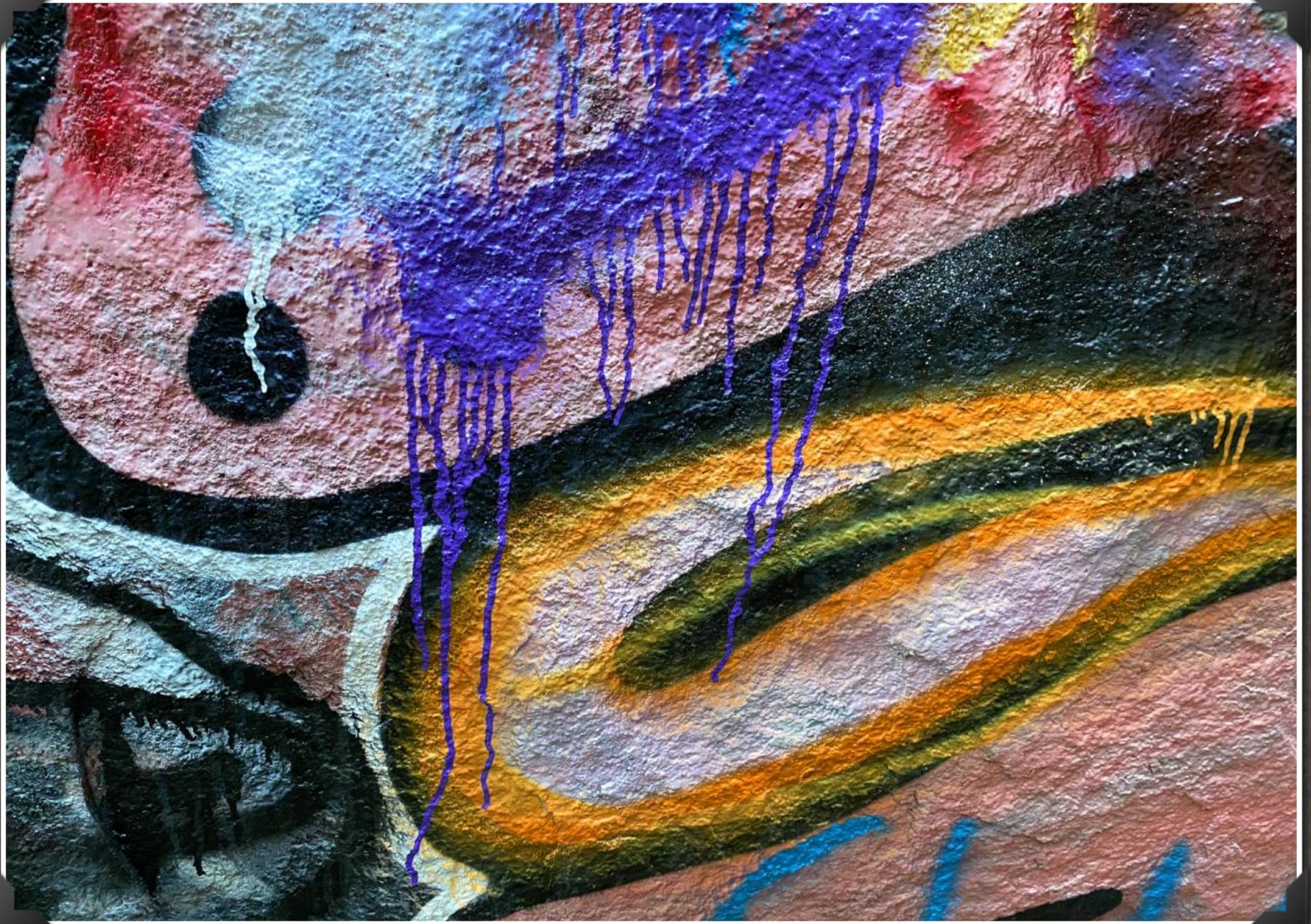
This first commercially practical and widely successful colour photographic process was known as Autochrome Lumière. It was patented in 1903 in France and first marketed in 1907.

EARLY AUTOCHROME LUMIÈRE (COLOR PHOTOGRAPH) TAKEN IN 1910









# NATURE

Colours of Nature



EVENING SUNLIGHT REFLECTING OFF WATER DROPLETS



POMEGRANATE



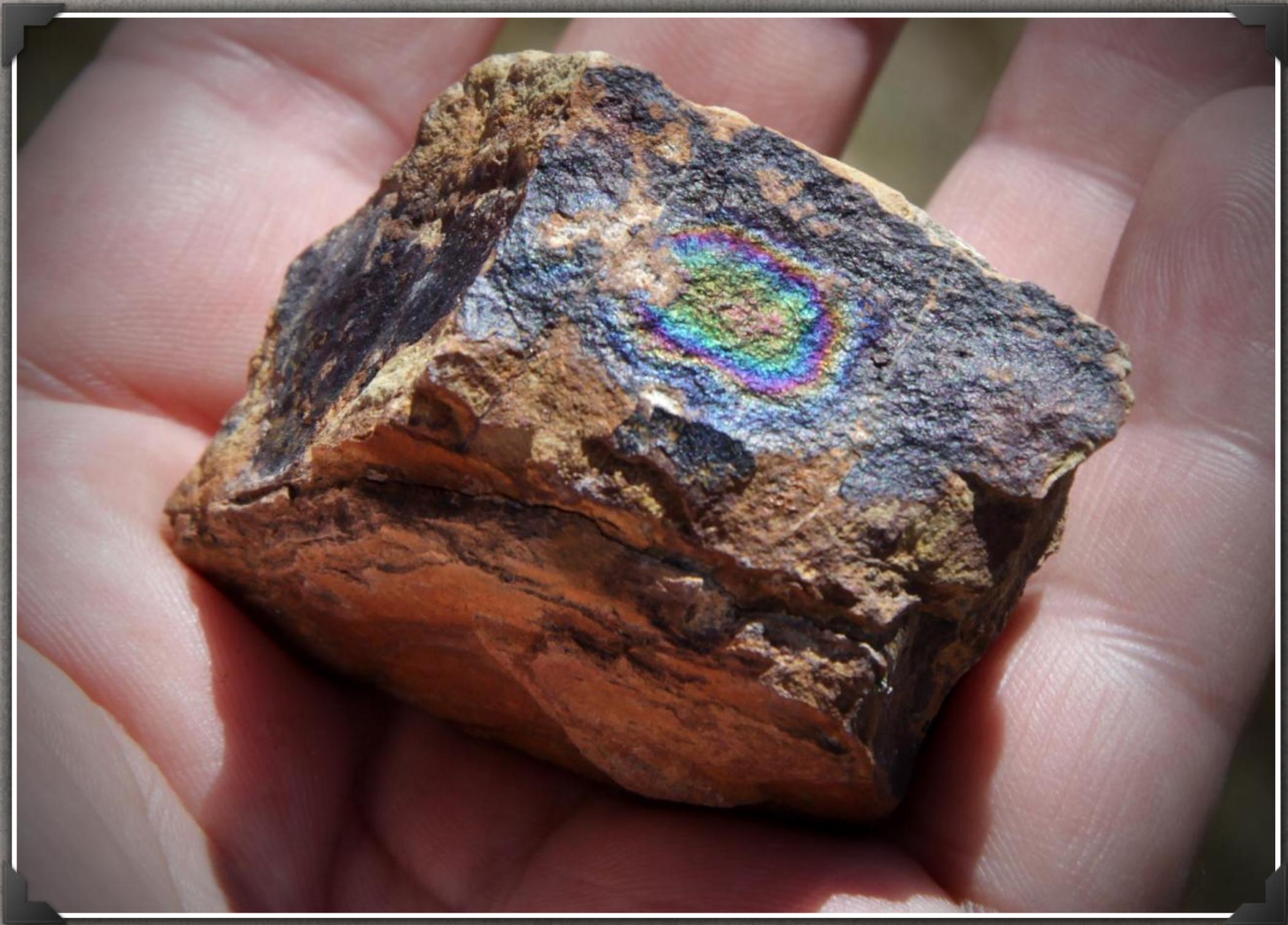
The belief that bulls love the  
colour red, is as myth.



ORANGE LICHEN



ROCK MINERALIZATION CAUSING IRIDESCENCE





# UNUSUAL COLOUR NAMES

## ROCK

### RUBY

PANTONE: 192 C  
HEX: #E40046  
RGB: (228,0,70)  
CMYK: (0,100,62,0)

### OPAL

PANTONE: 4170 C  
HEX: #A4BDBA  
RGB: (164,189,186)  
CMYK: (36,11,18,0)

### COPPER

PANTONE: 7511 C  
HEX: #B77729  
RGB: (183,119,41)  
CMYK: (3,47,91,22)

### EMERALD

PANTONE: 3278 C  
HEX: #009B77  
RGB: (0,155,119)  
CMYK: (100,0,65,0)

### GOLD

PANTONE: 7550 C  
HEX: #DA9100  
RGB: (218,145,0)  
CMYK: (0,33,100,15)

### JADE

PANTONE: 2251 C  
HEX: #00A86B  
RGB: (0,168,107)  
CMYK: (100,0,36,34)

### AMBER

PANTONE: 7548 C  
HEX: #FFC600  
RGB: (255,198,0)  
CMYK: (0,11,100,0)

### TURQUOISE

PANTONE: 323  
HEX: #005F61  
RGB: (0,95,97)  
CMYK: (100,00,38,47)

## OTHER NAMES

### GRAPHITE

PANTONE: 11 C  
HEX: #53565b  
RGB: (83,86,91)  
CMYK: (9,5,0,64)

### COPPER

PANTONE: 7511 C  
HEX: #B77729;  
RGB: (183,119,41)  
CMYK: (3,47,91,22)

### CYAN

PANTONE: 915 C  
HEX: #00BCE3;  
RGB: (0,188,227)  
CMYK: (100,0,0,0)

### HOT PINK

PANTONE: 213 C  
HEX: #ff00ff;  
RGB: (255,0,127)  
CMYK: (0,100,50,0)

### HAZEL

PANTONE:  
HEX: #8E7618  
RGB: (142,118,24)  
CMYK: (48,71,33)

### CERISE

PANTONE: 198 C  
HEX: #DF4661;  
RGB: (223,70,97)  
CMYK: (0,85,41,0)

### AMETHYST

PANTONE: 265 C  
HEX: #9063CD;  
RGB: (54,67,0,0)  
CMYK: (144,99,205)

### MINT

PANTONE: 351 C  
HEX: #A2E4B8;  
RGB: (162,228,184)  
CMYK: (32,0,33,0)

### INDIGO

PANTONE: 3535 C  
HEX: #4b0082;  
RGB: (75,0,130)  
CMYK: (42,100,0,49)

### CRIMSON

PANTONE: 201 C  
HEX: #9D2235;  
RGB: (157,34,53)  
CMYK: (0,100,63,31)

### MAUVE

PANTONE: 2058 C  
HEX: #BB85AB;  
RGB: (187,133,171)  
CMYK: (22,51,2,1)

### WALNUT

PANTONE: 7508 C  
HEX: #E2BB7B  
RGB: (226,187,123)  
CMYK: (0,17,46,11)

# HEATHCOTE PINK CLIFFS



Carbonate rich watery solutions were applied by miners to the surface to weaken gold-containing rock. This permanently stained the environment.

NATURAL ROCK COLOUR AT A RAIL CUTTING NEAR AVENEL





WATER



BLUE SKY





BRUNETTE



TREE TRUNK





















Only around seven percent of flowers in the world are blue, and interestingly, almost all are pollinated without the help of insects. Non-insect pollination is called abiotic pollination and these forms include wind, rain, water and switching methods.

BLUE STAR (*CHAMAESCILLA CORYMBOSA*) WILDFLOWER



According to various studies, the world's most favourite colour is blue (40 percent). The next favourite is purple (14 percent). As it turns out, not only do humans like blue, but so do mosquitos and horse flies.



When sun rays hit the gases in our upper atmosphere, the blue wavelength is scattered more than other colours and makes the sky appear blue. This unusual light phenomenon is called Rayleigh Scattering.



BLUE SKY







RAINBOW HALO (SUNDOG) AROUND THE SUN



ATMOSPHERIC COLOUR SEPERATION



INSECT WINGS CAUSING COLOUR SEPERATION



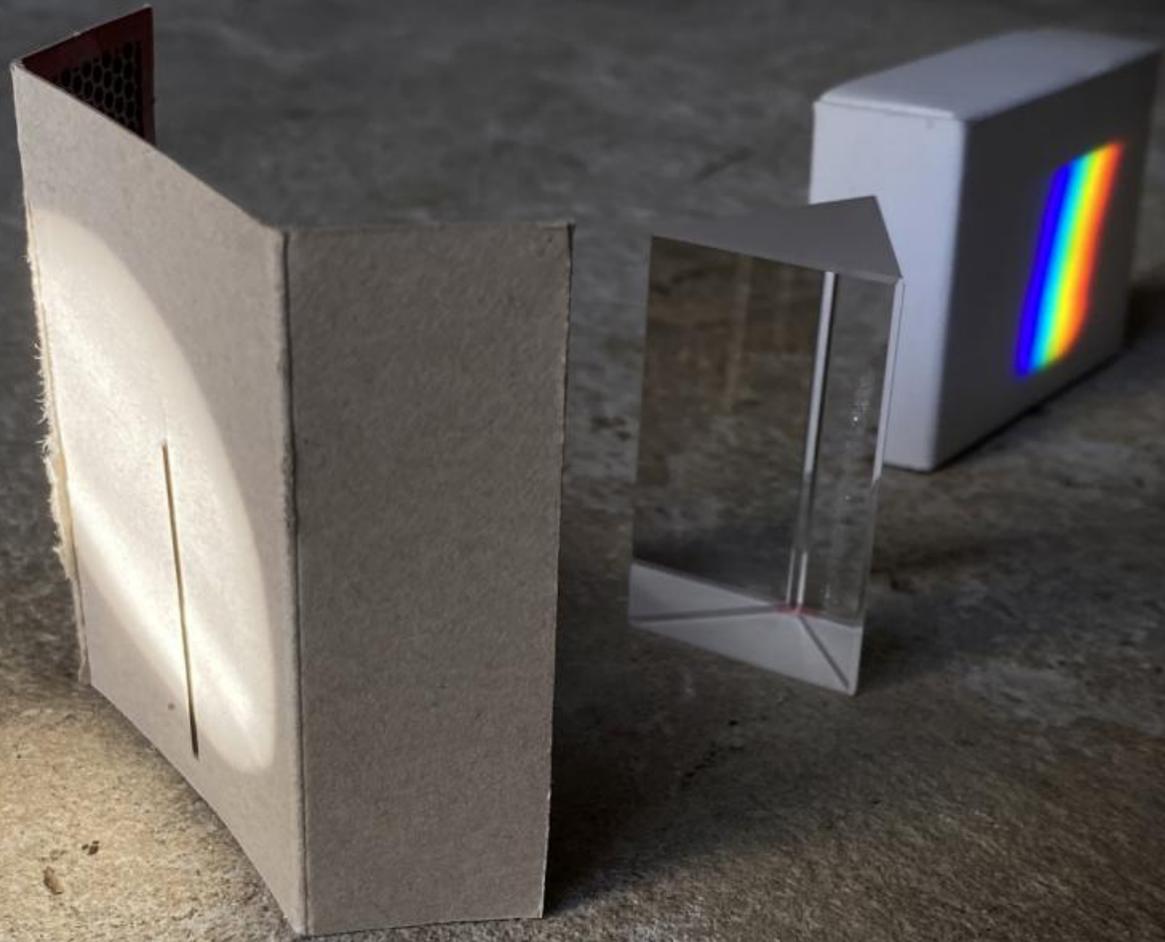
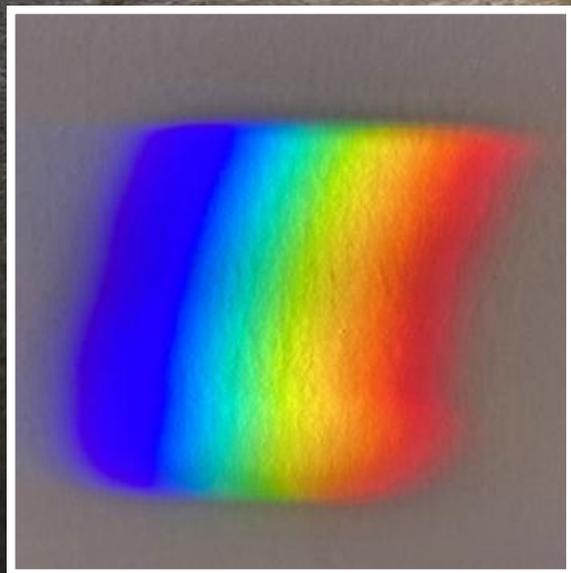
Bright yellow is considered to be the most irritating of all colours. It can cause people to feel nausea which is why it is generally avoided in planes. However, it is often used in fast food outlets as it helps motivate patrons to leave the premises quicker. It is also popular at playgrounds to motivate kids.

YELLOW CROP



In the early 1670s Isaac Newton discovered that white light was made up of seven different visible colours, and triangular prisms could be used to separate those colours and then re-combine them back into white light. This phenomenon is called light dispersion.

A PRISM DISPERSING THE SEVEN VISIBLE COLOURS THAT MAKE UP WHITE LIGHT



A round mirror is directing sunlight through a narrow slit in a box and onto a prism, which is separating the white light into multiple colours.

When white light enters a prism, it's split into seven different colours due to the colours travelling at different speeds through the prism and bending at different angles. The colours are red, orange, yellow, green, blue, indigo and violet.

# RAINBOWS

Colour Separation in the Atmosphere



RAINBOW



The colours separated by a prism are also seen in rainbows. In nature, droplets of rain act as tiny prisms which bend the light and cause the colours to be separated and projected.

RAINBOW



RAINBOW



RAINBOW



RAINBOW



RAINBOW



RAINBOW



RAINBOW



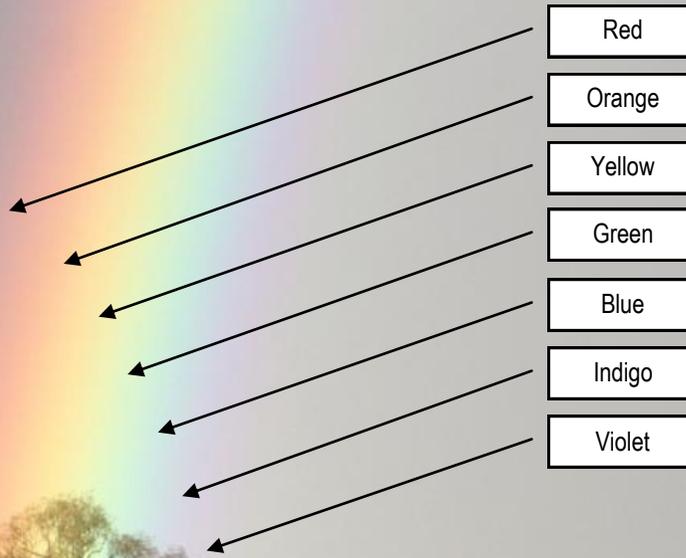
RAINBOW



RAINBOW



A RAINBOW IS WHITE LIGHT EMITTED FROM THE SUN THAT HAS BEEN SPLIT INTO SEVEN COLORS



- Red
- Orange
- Yellow
- Green
- Blue
- Indigo
- Violet

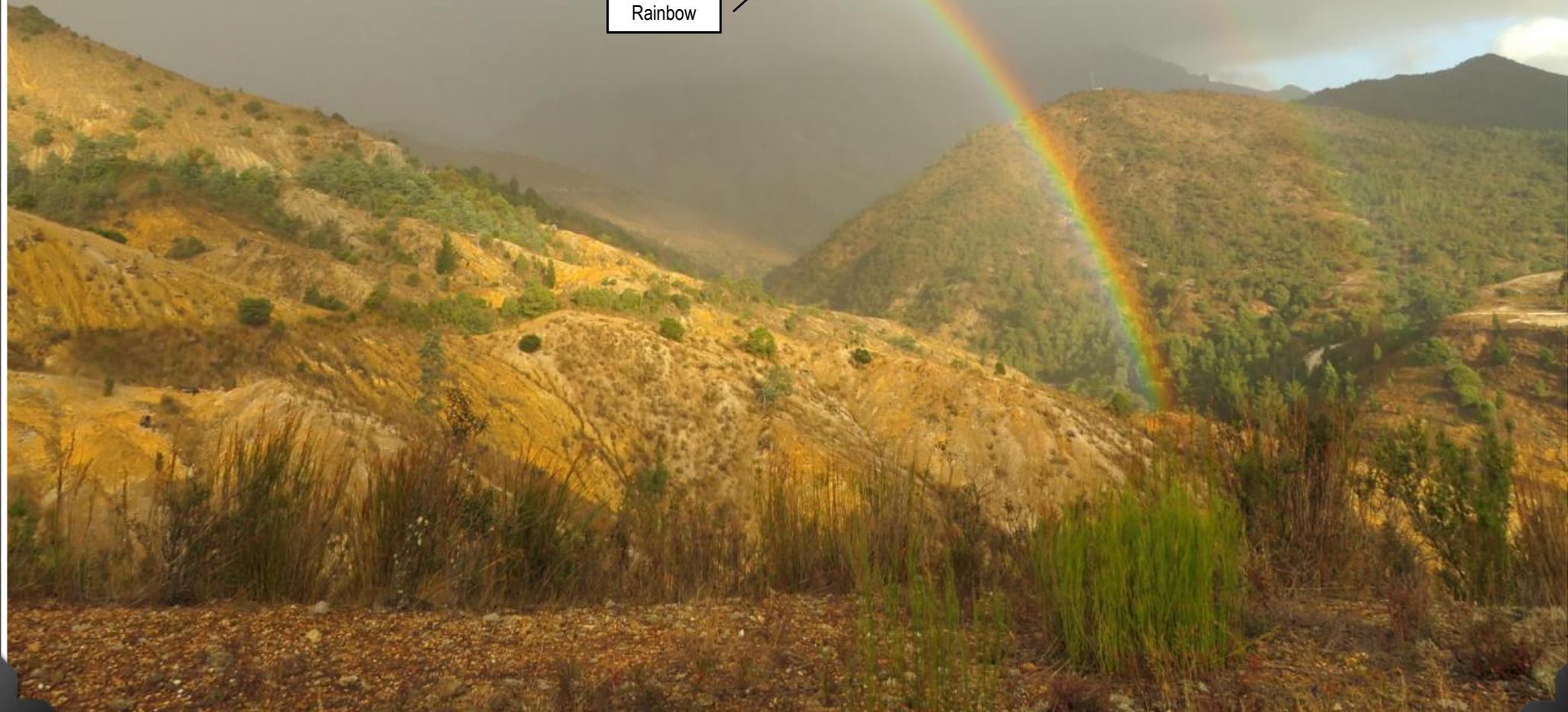
Rainbows have seven colours, in this order: Red, Orange, Yellow, Green, Blue, Indigo and Violet.

Rainbows are optical illusions formed by the reflection and refraction of sunlight through raindrops. As can be seen in the next photos, two rainbows are sometimes visible at the same time and the second fainter rainbow has its colours reversed.

DOUBLE RAINBOW

Rainbow

Reversed rainbow



DOUBLE RAINBOW



Reversed rainbow

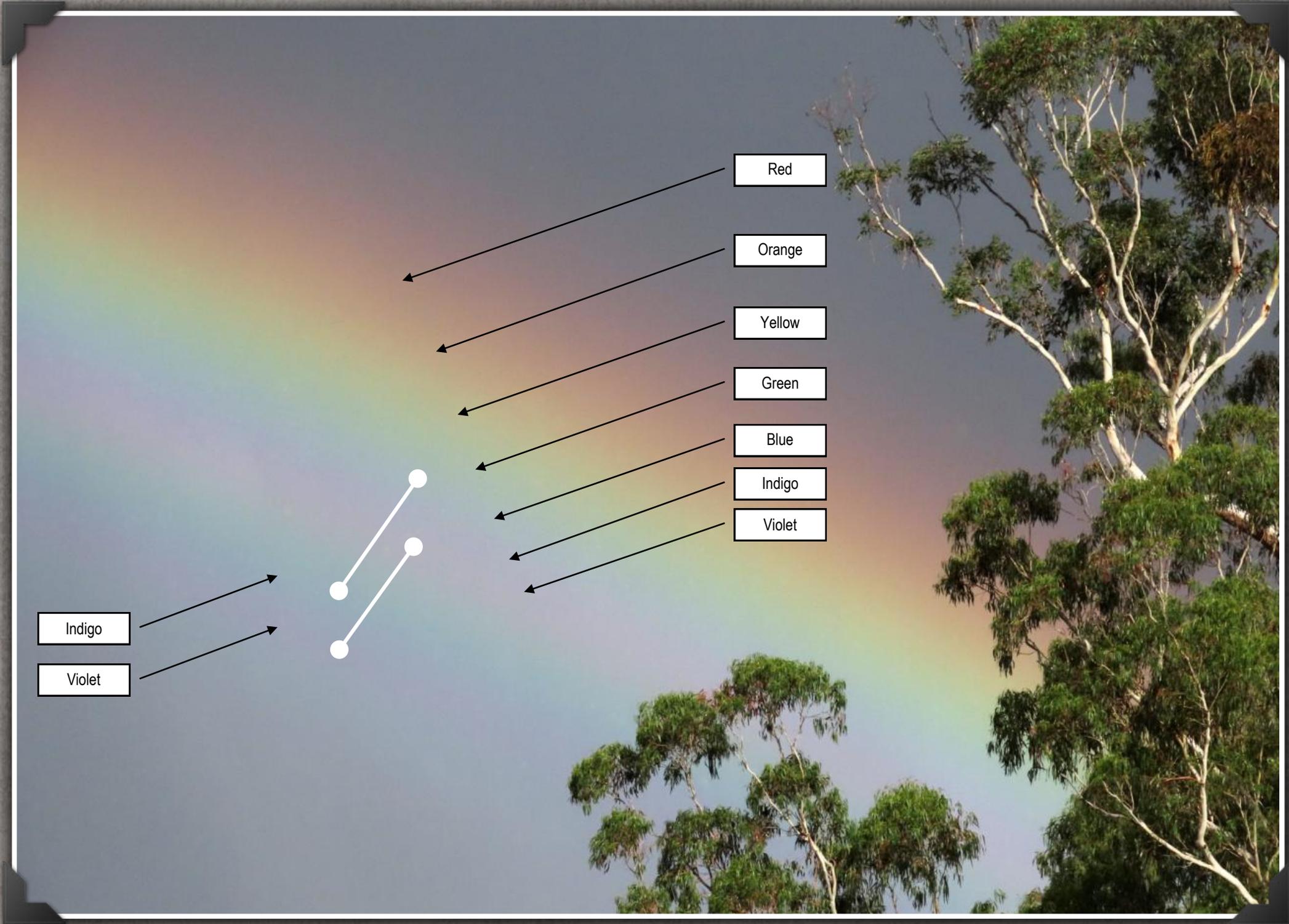
Rainbow

A SLIGHT GHOST RAINBOW UNDER THE MAIN RAINBOW



It is believed that there is a faint rainbow behind and slightly lower than the main rainbow. Three colours are visible.

A SLIGHT GHOST RAINBOW UNDER THE MAIN RAINBOW



Indigo

Violet

Red

Orange

Yellow

Green

Blue

Indigo

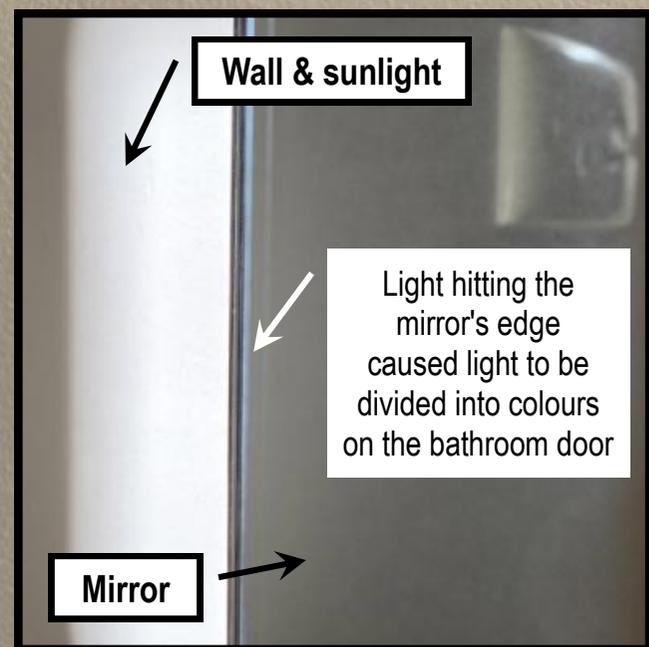
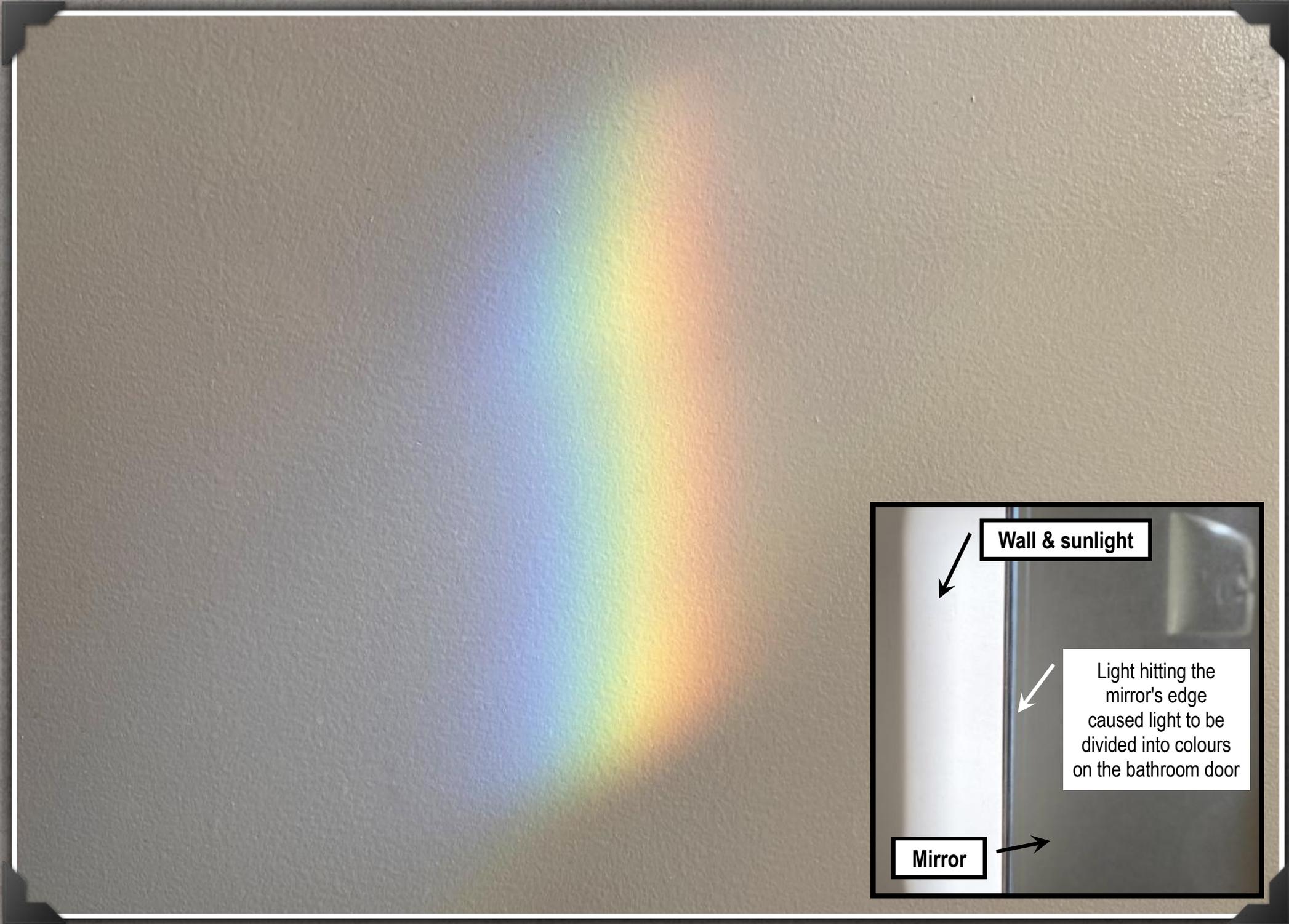
Violet

Two duplicated colours highlighted in this frame

RAINBOW EFFECT CAUSED BY GLASS LENSES IN A CAMERA DEFRACTING LIGHT



RAINBOW EFFECT CAUSED BY SUNLIGHT HITTING THE EDGE OF A BATHROOM MIRROR



Wall & sunlight

Light hitting the mirror's edge caused light to be divided into colours on the bathroom door

Mirror

BUBBLES REFLECTING AND REFRACTING LIGHT



The dark grey colour many people report seeing just after we turn off the light in a dark room, is known as eigengru. Wiki describes it as the persistent grey colour that many people see in the absence of light.



# IRIDESCENCE

Colour Phenomenon



Iridescence is a phenomenon where surfaces appear to change colour as the angle and intensity of light changes.

Examples of iridescence in nature include butterflies, beetles, feathers, bubbles, sea shells and mineralised rock such as opal.



IRIDESCENT PEACOCK FEATHERS



IRIDESCENT SEA SHELL



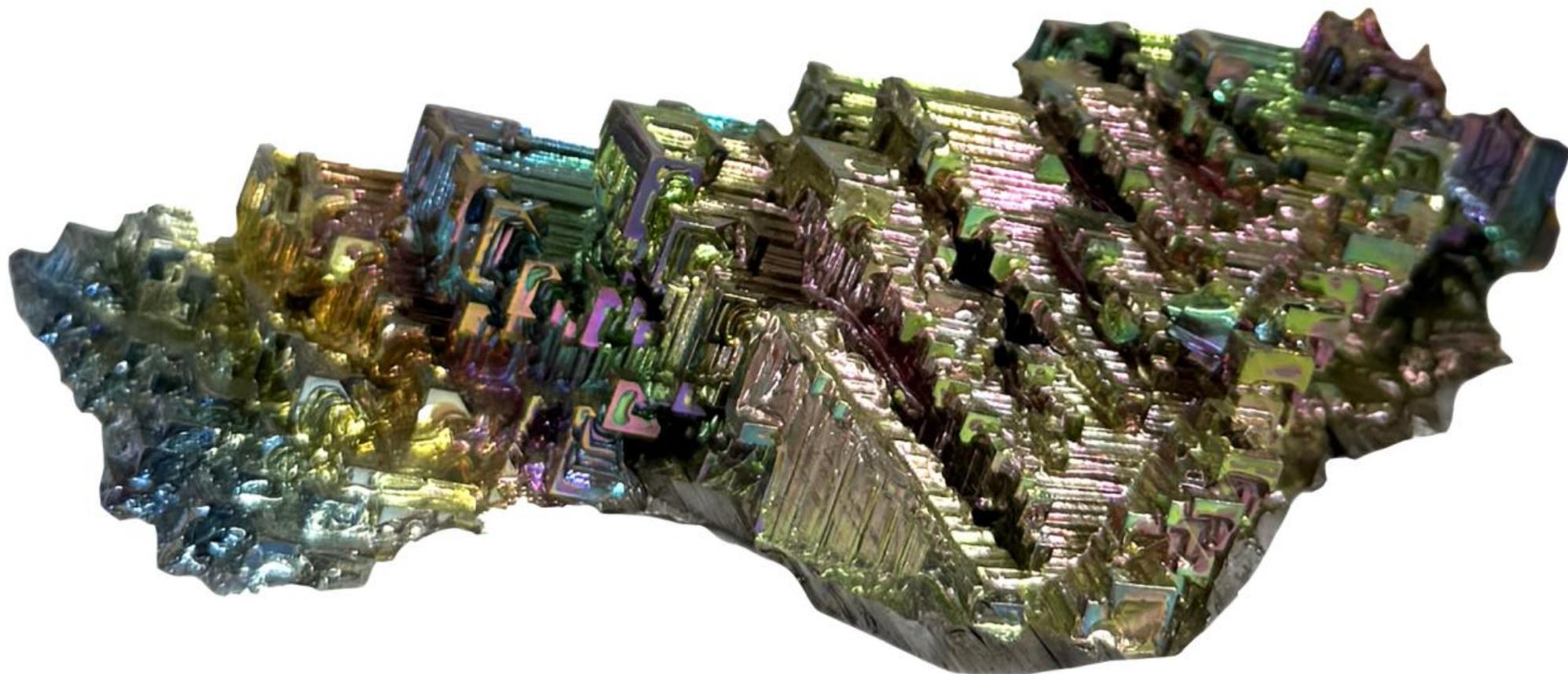
\$195.00  
NORWIDE B/LET

HM100120

IRIDESCENCE ON A ROCK



IRIDESCENCE ON A MINERAL



IRIDESCENCE ON OPALITE



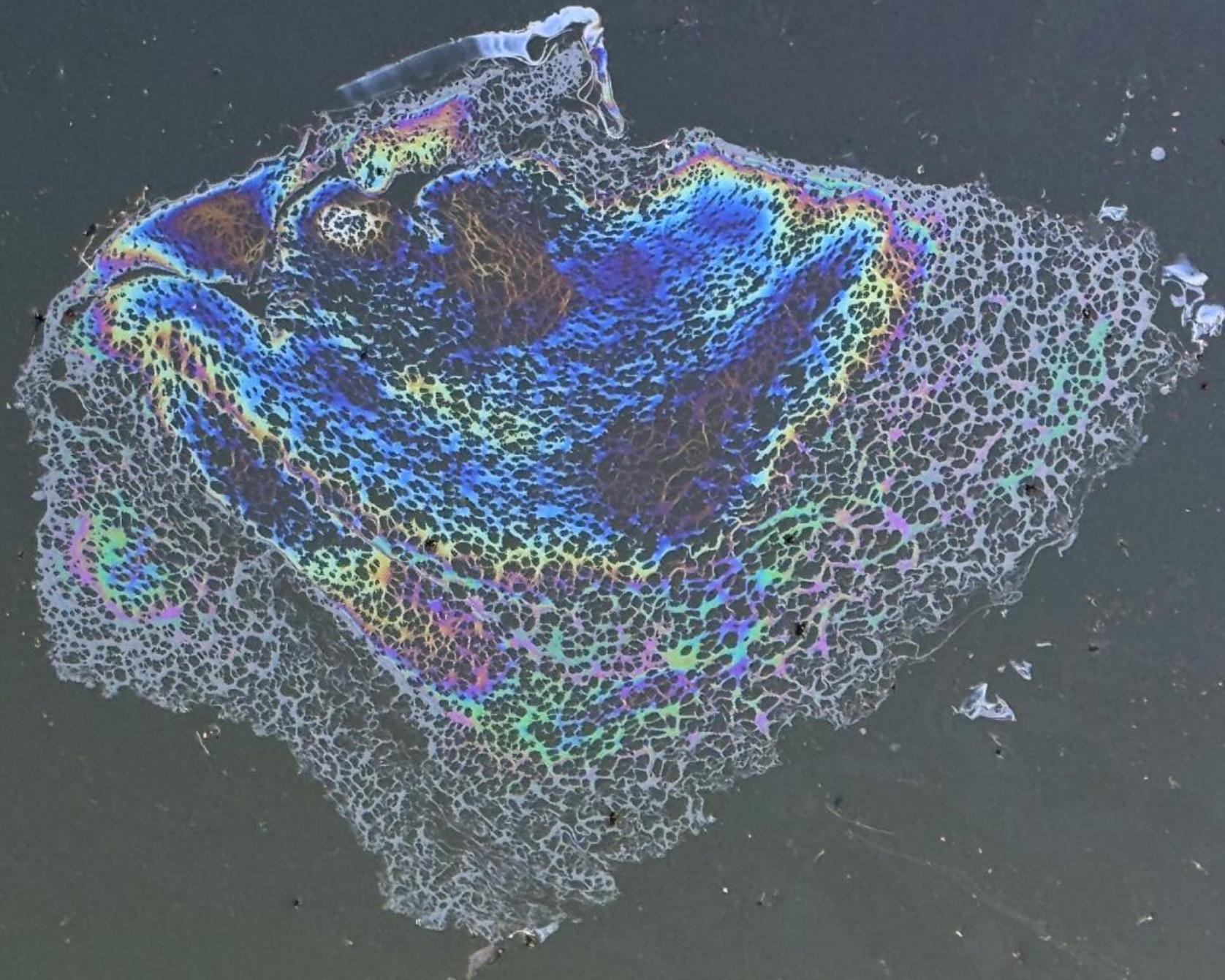
IRIDESCENCE ON A BUTTERFLY



IRIDESCENCE ON A LONG-LEGGED FLY



IRIDESCENCE CAUSED BY POLLUTED WATER



IRIDESCENCE ON BUBBLES



# FOOD

Colours of Food







SALAD



HUNDREDS AND THOUSANDS



HUNDREDS AND THOUSANDS IN MILK





FRUIT SALAD



JELLY BEANS







Chromophobia is the word used to describe an irrational fear of colours.

ICE CREAM



MARACUJA

Mango

Limoncello

LAME

non



Some lollies are made using brightly coloured food dyes. As we grow, our brains learn to associate those colours with their yummy taste. Then when we see those colours, it makes us think of those tastes and we want to buy the lolly. This is an effective advertising trick.







PUMPKIN







Many foods have artificial colours (food dyes) added to them to make them appear more appealing. Some people have allergic reactions to food dyes, and studies have linked them to conditions such as ADHD and cancer.



DONUT



# SUNRISE AND SUNSETS

Colours of Morning and Evening Skies



SUNRISE



SUNSET



SUNSET



SUNSET



SUNSET



# AUTUMN

Colours of Autumn



Autumn is considered the most  
colourful of all the seasons.

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# COLOURS OF FLORA IN AUTUMN

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Autumn has the widest gamut of colour of all four seasons. All the colours above, as well as tints, tones and shadows derived from them, can be found in Autumn.

AUTUMN LEAVES



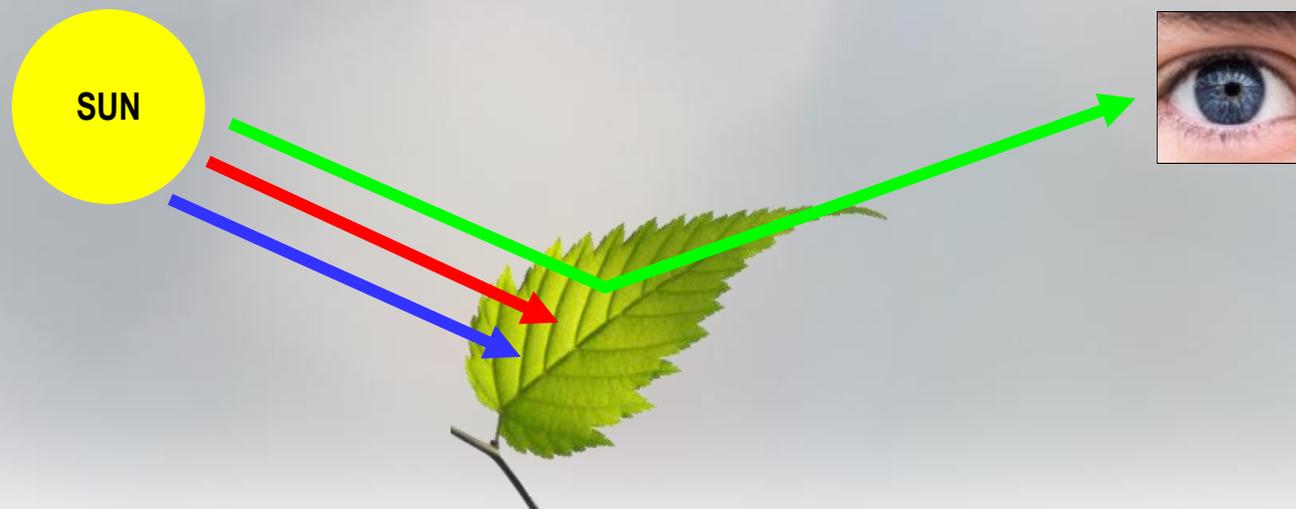


AUTUMN LEAVES





Leaves appear green because they contain the chemical chlorophyll, which absorbs most of the red and blue light wavelengths, while leaving green to reflect to our eyes. Chlorophyll enables the natural process of photosynthesis.





The red and purple colours in leaves are produced by the chemical anthocyanin, which also helps protect the leaves from sunburn.



The yellow and orange colours  
in leaves are produced by the  
chemical carotenoids.

YELLOW AUTUMN LEAVES



Brown colours are caused  
by natural tannins.



AUTUMN LEAVES



# 'epic'

*epic - (adjective) Surpassing the usual or ordinary*

*ePic - (noun) Illustrated by **electronic pictures***



## **The Artworkz 'ePic Photo Group' eMagazine**

ePic Photographers: Debbie & David Hibbert

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