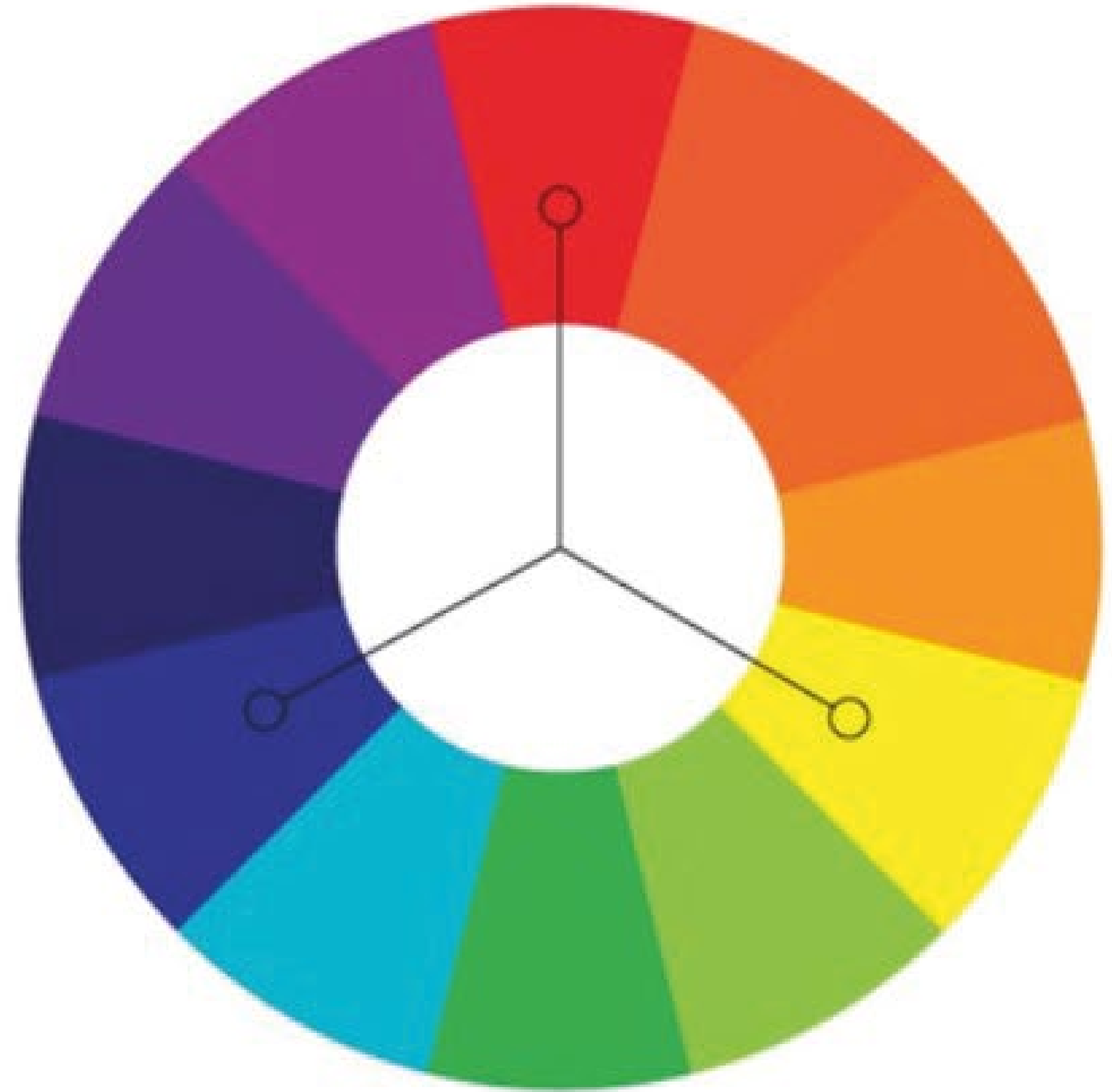# INSTITUTO
ALPHA LUMEN
APOIO AO TALENTO

Teoria das Cores

Primárias, Secundárias & Terciárias

Cores primárias

Existem apenas três cores puras: vermelho (magenta), amarelo e azul (ciano). Elas são chamadas de primárias, porque nada pode ser misturado para produzi-los: eles devem ser feitos ou comprados. Com eles podemos fazer qualquer outra cor, exceto branco.

Cores secundárias

Misturando pares de cores primárias chegaremos aos laranjas, verdes e violetas, que são chamados de cores secundárias.

Verde
(azul + amarelo)

Laranja
(vermelho + amarelo)

Roxo
(azul + vermelho)

Cores terciárias

São as misturas obtidas de uma cor primaria mais uma cor secundaria.

Cor Primária		Cor Secundária		Cor Terciária
Magenta	+	Violeta	=	Magenta-arroxeado
Magenta	+	Laranja	=	Magenta-alaranjado
Amarelo	+	Verde	=	Amarelo-esverdeado
Amarelo	+	Laranja	=	Amarelo-alaranjado
Azul cian	+	Verde	=	Azul-esverdeado

Frias &
Quentes

Color Wheel (Roda de Cores) é uma ferramenta simples usada para descobrir e coordenar a harmonia das cores.

Você sabia? O primeiro diagrama circular de cores foi desenhado por Sir Isaac Newton, em 1666.

A Roda de Cores pode ser dividida em **cores frias** e **quentes**.
Uma combinação excessiva dessas cores pode confundir o espectador.

CORES "QUENTES"

As cores quentes são utilizadas para refletir paixão, felicidade, entusiasmo e energia.
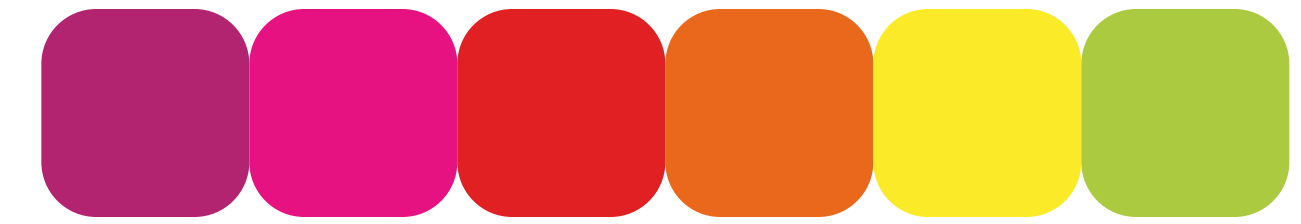
CORES "FRIAS"

As cores frias dão a sensação de calma e profissionalismo.

Cores quentes

São as cores que transmitem calor, alegria e luz, a exemplo do amarelo, laranja e vermelho.

Cores frias

Caracteriza-se pelas cores menos vibrantes, melancólicas, calmas comum do verde, roxo e azul

Cores neutras

O preto o branco e o cinza, em todas as suas tonalidades, claras ou escuras formam as cores neutras. As demais cores, quando perdem o seu colorido pela excessiva mistura com o preto, o branco ou o cinza, também se tornam cores neutras.

Harmonias Cromáticas

Harmonia monocromática:

É a variação de luminosidade e saturação de uma única matiz do círculo cromático.

Harmonia análoga:

São as 3 cores que ficam juntas, uma ao lado da outra no círculo cromático.

Harmonia complementar:

São as cores que se localizam opostas no círculo cromático, a complementar de uma cor primária sempre será uma cor secundária, e vice-versa, a complementar de uma terciária sempre será outras terciárias.

Harmonia triádica:

São 3 cores que tenham a mesma distância entre elas no círculo cromático, formando um triângulo equilátero. As cores primárias são triádicas, assim como as secundárias e as terciárias.

Harmonia complementar dividido:

São combinações entre uma cor escolhida e as duas cores vizinhas à sua cor complementar.

Harmonia dupla complementar:

São duas duplas de Complementares diretas cruzadas, intercalando uma cor. Também chamada por alguns de tétrades.

Harmonia acromática:

São as cores chamadas neutras: branco, preto, cinzas e marfim. As cores situadas na zona central do círculo cromático, que perdem tanta saturação que não aparece mais o matiz original.
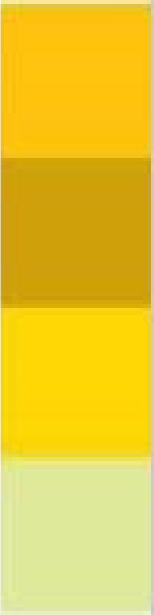
Psicologia das Cores

4
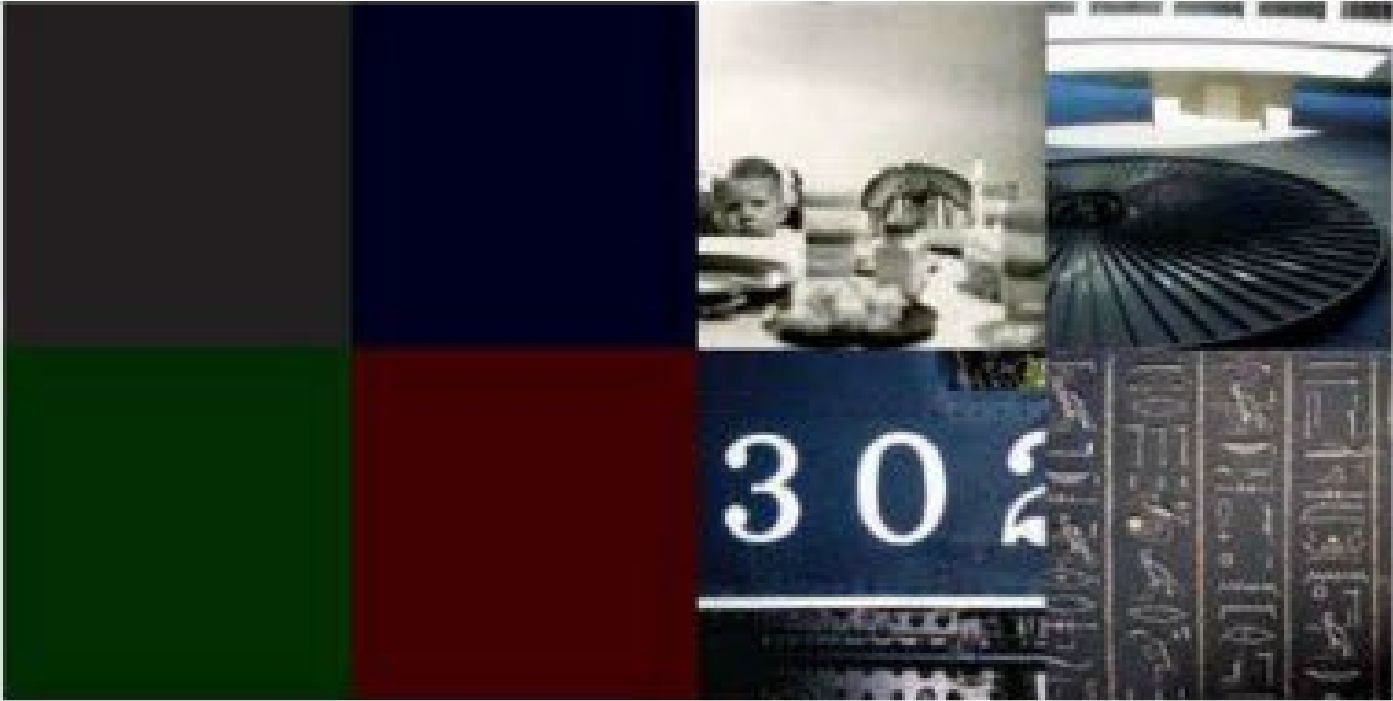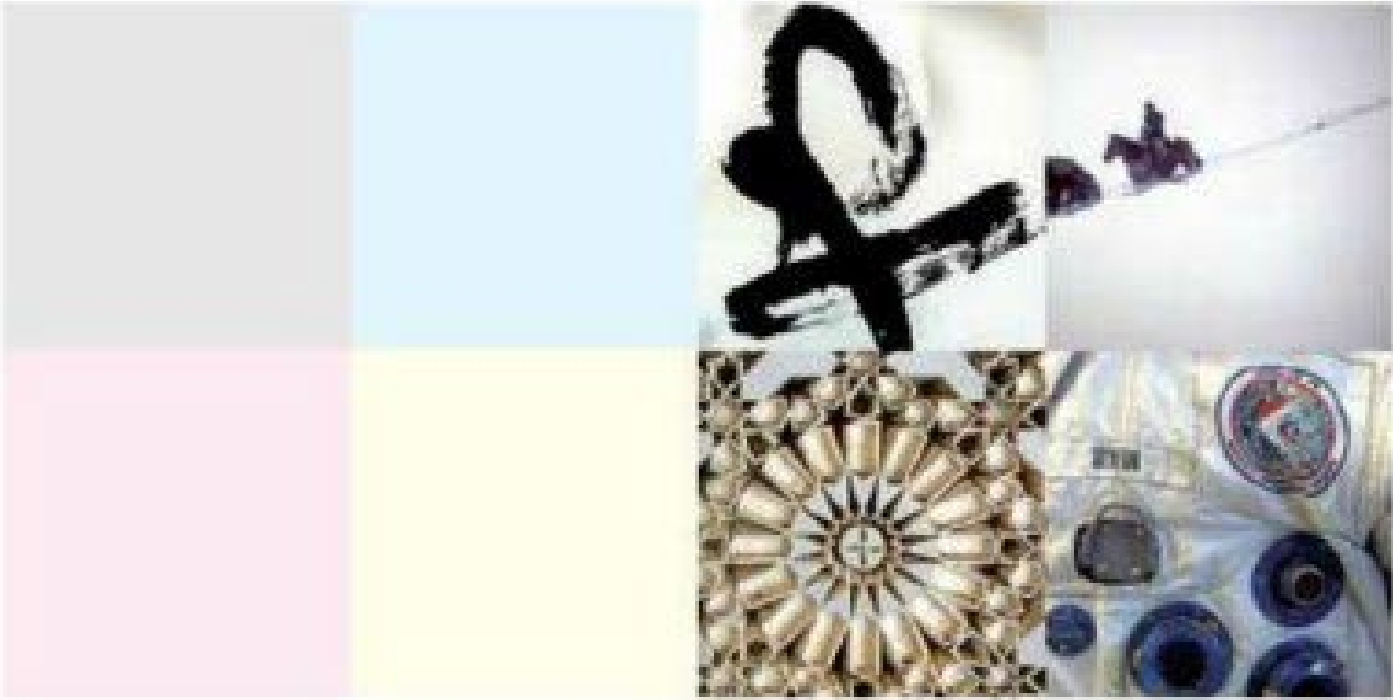
	Color	Associated with	Positive	Negative
	Red	fire blood sex	**passion** **love** **blood** **energy** **enthusiasm** **excitement** **heat** **power**	aggression anger battle revolution cruelty immorality
	Yellow	sunshine	**intellect** **wisdom** **optimism** **radiance** **joy** **idealism**	jealousy cowardice deceit caution
	Blue	sea sky	**knowledge** **coolness** **peace** **masculinity** **contemplation** **loyalty** **justice** **intelligence**	depression coldness detachment apathy
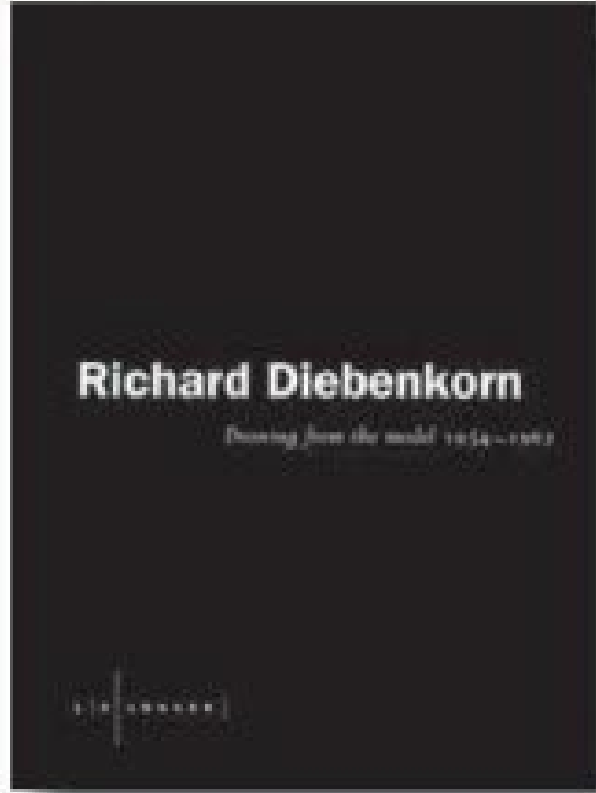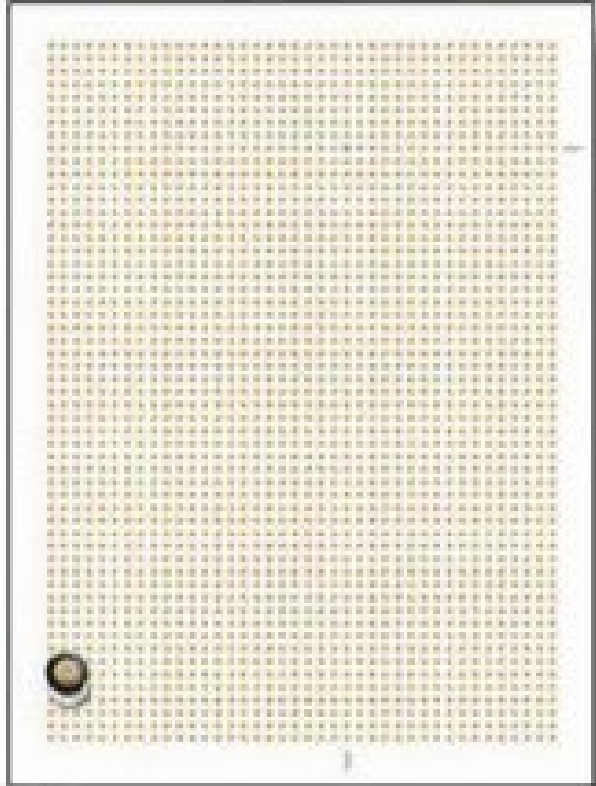
Cultural links	In addition	Sample

Ivory Coast, Africa
Dark red indicates death.
France
Masculinity
Most of Asia
Marriage, prosperity, happiness
India
Soldier's symbol
South Africa
Color of mourning

- Most visually dominant color
- Suggests speed, action
- Stimulates heart rate, breathing, and appetite
- People appear heavier in red clothes.
- Red cars are stolen most often.

This souvenir tour book was created for the singer Cher's Farewell Concert Tour. Pictured here is the back cover of the book on which the color red predominates to convey the passionate, spicy side of Cher. Color is manipulated to feature a variety of reds.
Chase Design Group

Buddhist cultures
Priests wear saffron yellow robes.
Egypt and Burma
Signifies mourning
India
Symbol of merchant or farmer
Hindu cultures
Worn to celebrate the festival of spring
Japan
Associated with courage

- First color that the human eye notices
- Brighter than white
- Speeds the metabolism
- Bright yellow is the most fatiguing color; can irritate the eyes.
- Pale yellow can enhance concentration (used for legal pads).

The cover of the *American Photography 17* book, featuring bright yellow with a hint of red, virtually shouts to passersby—the goal of the designer. The back cover is the reverse of the front, with red dominating the yellow. *AP17* is a handsome 432-page volume that presents the best photography of the year, as selected by a jury of publishing professionals.
344 Design

Most of the world
Considered a masculine color
China
Color for little girls
Iran
Color of mourning
Western bridal tradition
Means love
Worldwide
Most popular corporate color

- Blue food is rare in nature; unappetizing, suppresses hunger.
- Causes the body to produce calming chemicals; relaxing
- People are said to be more productive in blue rooms.
- Blue clothing often symbolizes loyalty or trust.

The front cover of Cher's souvenir tour book illustrates Cher's cool serene side with its blue tones. The designers used similar photos of Cher in both covers but altered them with color changes to develop the naughty and nice themes.
Chase Design Group

	Color	Associated with	Positive	Negative
	Green	plants the natural environment	fertility money growth healing success nature harmony honesty youth	greed envy nausea poison corrosion inexperience
	Purple	royalty spirituality	luxury wisdom imagination sophistication rank inspiration wealth nobility mysticism	exaggeration excess madness cruelty
	Orange	autumn citrus	creativity invigoration uniqueness energy vibrancy stimulation sociability health whimsy activity	crassness trendiness loudness

Cultural links	In addition		Sample
Islam Green is associated with paradise and is symbolic of Islam. **Ireland** Green is strongly associated with this country. **Celtic cultures** The Green Man was the god of fertility. **Native American cultures** Green is linked with the will, or man's volition.	• Green is the easiest color on the eyes. • Green is a calming and refreshing color, often used in hospitals to relax patients. • Green means "go"; everything is in order. • Green is said to aid digestion and reduce stomachaches.		The U.S. Environmental Protection Agency (EPA) is dedicated to protecting human health and the environment. The obvious choice for the identity was a bright grass green to signify nature. Chermayeff & Geismar
Latin America Purple indicates death. **Thailand** Purple is worn by widows mourning a husband's death. **Japan** Purple represents ceremony, enlightenment, and arrogance.	• Purple has a feminine and romantic quality that is sometimes associated with male homosexuality. • Rare in nature, purple seems artificial. • In ancient times, purple dyes were expensive and worn by royalty and the wealthy only. • Purple is said to enhance the imagination and thus is used in decorating children's rooms.		Encounter Restaurant is located in the 1960s futuristic "Theme Building" at Los Angeles International Airport. The logo, a deep intense violet to mirror the exterior lighting feature that plays across the building's exterior, sparks the imagination about the future. AdamsMorioka
Ireland Orange signifies the Protestant movement in Northern Ireland. **Native American cultures** Orange is linked with learning and kinship. **India** Orange signifies Hinduism. **Netherlands** Orange is the national color because the Dutch monarchs came from Orange-Nassau.	• Orange is an appetite stimulant. • Orange rooms get people thinking and talking. • Orange rooms speak of friendliness and fun. • Orange is used for visibility enhancement, which is why hunters and highway workers wear it.		The Nickelodeon kids' TV network identity was originally designed by Tom Corey and utilizes white balloon type knocked out of any orange shape. Orange was chosen because it was little used in children's products at that time and because the color is a bit irreverent, which captured Nick's point of view. This electron logo is a new version of the classic in irreverent orange. AdamsMorioka

Color	Associated with	Positive	Negative
Black	night death	power authority weight sophistication elegance formality seriousness dignity solitude mystery stylishness	fear negativity evil secrecy submission mourning heaviness remorse emptiness
White	light purity	perfection marriage/wedding cleanliness virtue innocence lightness softness sacredness simplicity truth	fragility isolation
Gray	neutrality	balance security reliability modesty classicism maturity intelligence wisdom	lack of commitment uncertainty moodiness cloudiness old age boredom indecision bad weather sadness

Cultural links	In addition	Sample

China
Black is for little boys.
Asia generally
Black is associated with career, knowledge, mourning and penance.
American, European, Japanese youth
Black is the color of rebellion.
Worldwide
Black denotes dark-skinned people of sub-Saharan African ancestry.

- Black clothing makes people look thinner.
- Black humor is morbid.
- Black makes other colors look brighter.
- In color therapy, black is supposed to boost self-confidence and strength.
- Black is often associated with secret societies.

Richard Diebenkorn
Drawing from the model 1954–1962

This L.A. Louver Gallery catalog for artist Richard Dievenkorn's black and white pencil drawings was given a black cover to suggest the exhibition works as well as to provide dignified elegance.
AdamsMorioka

Japan and China
White is a funeral color.
Worldwide
A white flag is a universal symbol for truce.
North America, Europe
White denotes light-skinned people of Caucasian ancestry.
India
Married women who wear white invite unhappiness.

- In some culture, it's considered good luck to be married in a white garment.
- White is the perfectly balanced color.
- White is so brilliant that it gives some people headaches.
- White light can be blinding.
- White is associated with angels and gods.

Minimal graphic elements, primarily the design firm's logo, against a stark white background create a feeling of open space while being a self-promotion that celebrates the new year in this 2002 poster.
344 Design

Native American
Gray is associated with honor and friendship.
Asian
Gray means helpful people as well as travel.
America
The color gray is used to represent industry, in contrast to environmentalism, which is represented by green.
Worldwide
Gray is often associated with silver and money.

- Gray seldom evokes strong emotions.
- Gray is a balance of black and white.
- Gray is its own complement.
- Grayscale means rendering an image in a range of blacks and whites. It also refers to a tonal scale of blacks and whites that is used in calibration and accurate reproduction of halftone images.

This promo for fashion designer Anni Kuan features New York Laundromats. The gray effect is achieved by printing black ink on newsprint. The overall effect of the piece is a balanced yet gritty portrait of the city rendered in monochromatic images.
Sagmeister, Inc
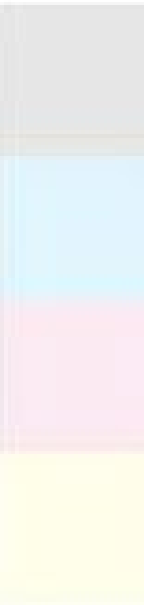
Estudo
de Bamz

ESTUDO DE BAMZ

O psicólogo Bamz defende o fator idade versus preferência na manifestação de uma pessoa por determinada cor. Segundo pesquisas, o cristalino do olho humano vai gradativamente se tornando amarelo com o passar dos anos.

Uma criança absorve 10% da luz azul, em contrapartida um idoso absorve cerca de 57%. Ao observarmos os adultos fazendo compras poderemos notar que os mais idosos dão preferência a produtos contidos em embalagens em que prevalece a cor azul.

Vermelho	01 a 10 anos	espontaneidade e efervescência
Laranja	de 10 a 20 anos	aventura, excitação e imaginação
Amarelo	de 20 a 30 anos	arrogância, força
Verde	de 30 a 40 anos	diminuição da agitação juvenil
Azul	de 40 a 50 anos	inteligência e do pensamento
Lilás	de 50 a 60 anos	lei e misticismo
Roxo	além dos 60 anos	benevolência, saber e experiência

Todos estes fatores e outros estudos sobre as cores devem ser analisados na hora de definir como será apresentado o site/Aplicativo. Um dos princípios padrões para o Arquiteto da Informação é a atração que a plataforma deve ter para o usuário. O ambiente deve ser agradável de acessar e como cores que chamem a atenção para os locais que se quer de destaque. Devem facilitar a navegação no sistema.
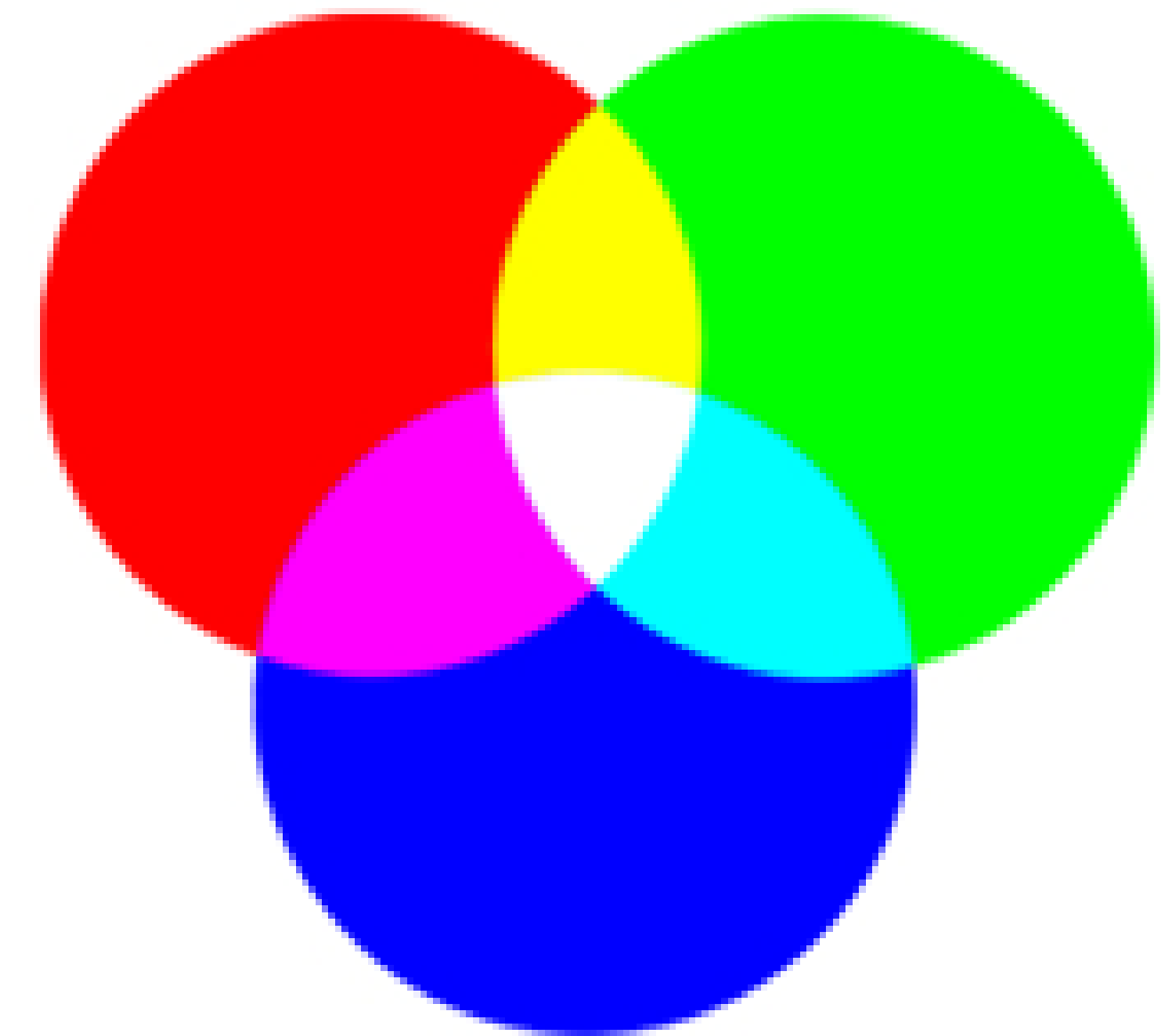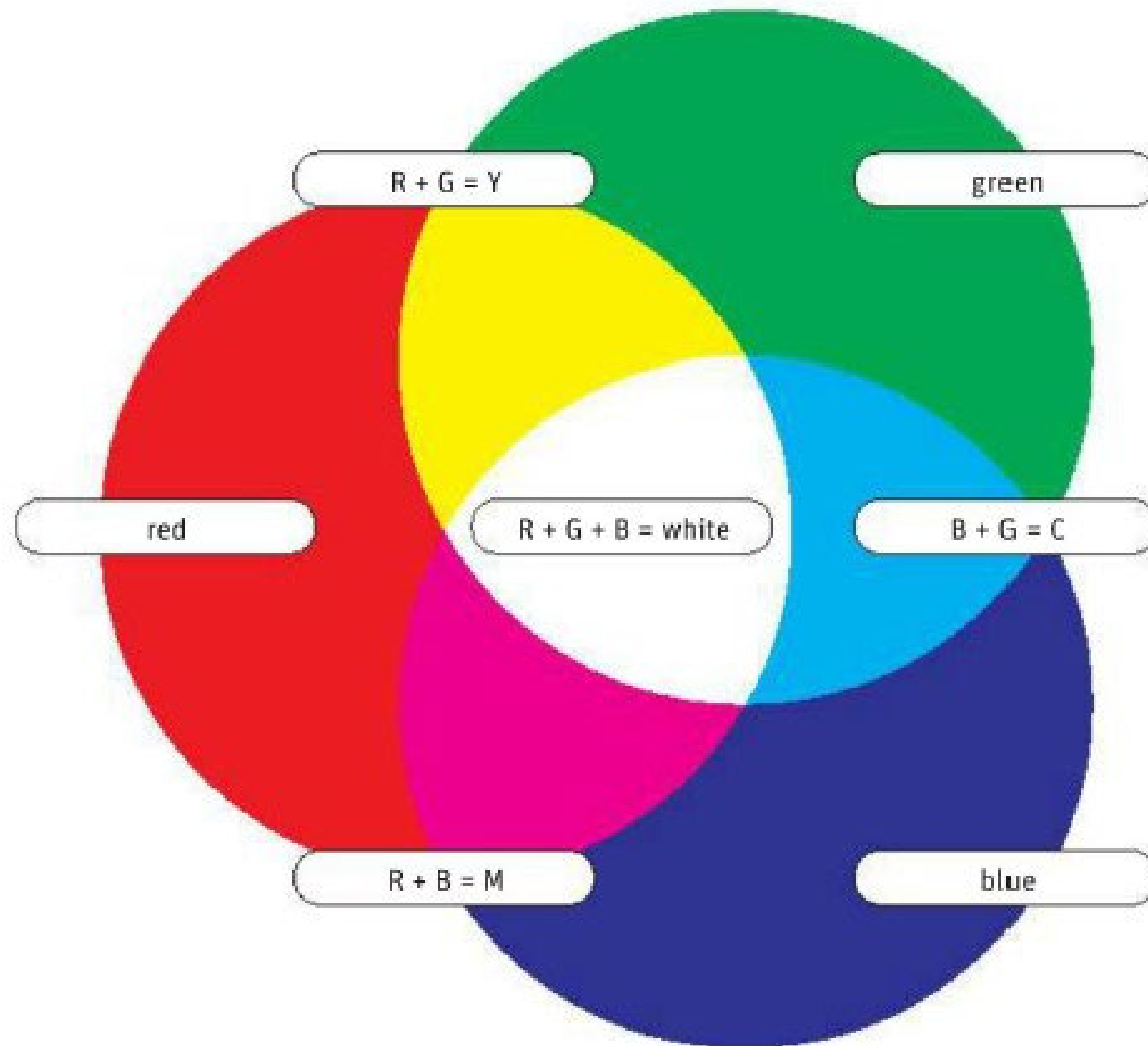
RGB, CMYK
PMS e Hex

RGB

O termo RGB é um acrônimo para Red (Vermelho), Green (Verde) e Blue (Azul). As cores RGB são chamadas de cor luz, pois quando há a sobreposição das cores secundárias, forma-se a cor branca. As cores RGB são utilizadas em monitores, tais como: televisão, câmeras, telas de computadores e celulares.

Additive Mixing (RGB Model)

R + G = Y

green

red

R + G + B = white

B + G = C

R + B = M

blue

R	**G**	**B**
61	183	228

R	**G**	**B**
255	136	73

| **R**	**G**	**B**
105	190	40

CMYK

O significado de CMYK vem das cores:
Cyan (Ciano), Magenta, Yellow (Amarelo),
e Key (Chave). A última palavra Key
representa a cor preta, porém é chamada
de Chave pois é a cor necessária para
fazer outras cores de forma ilimitada.
É importante saber que o sistema CMYK é
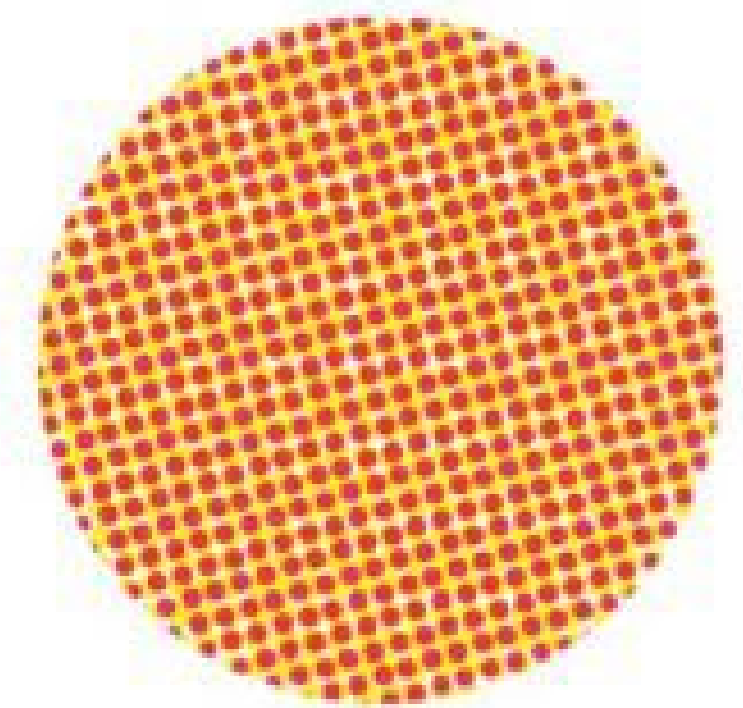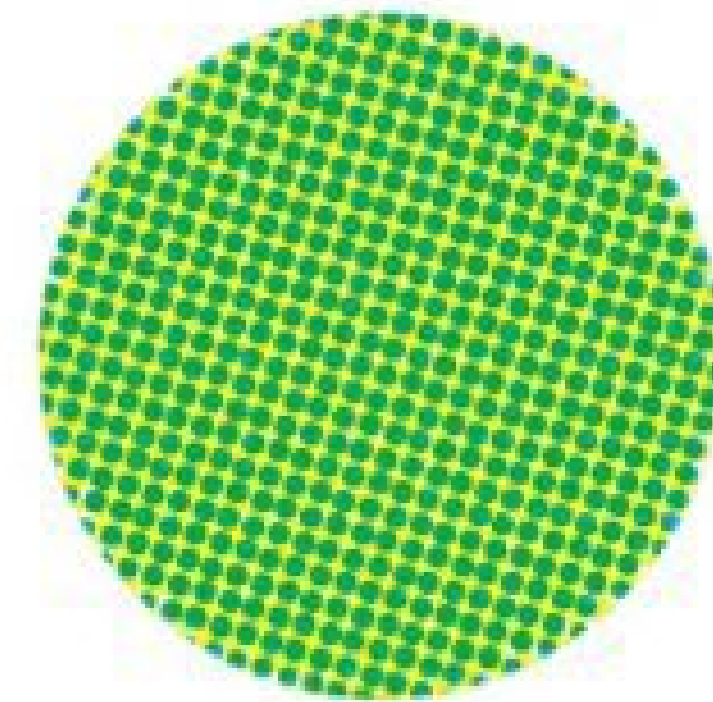utilizado em fotocopiadoras e
impressoras.
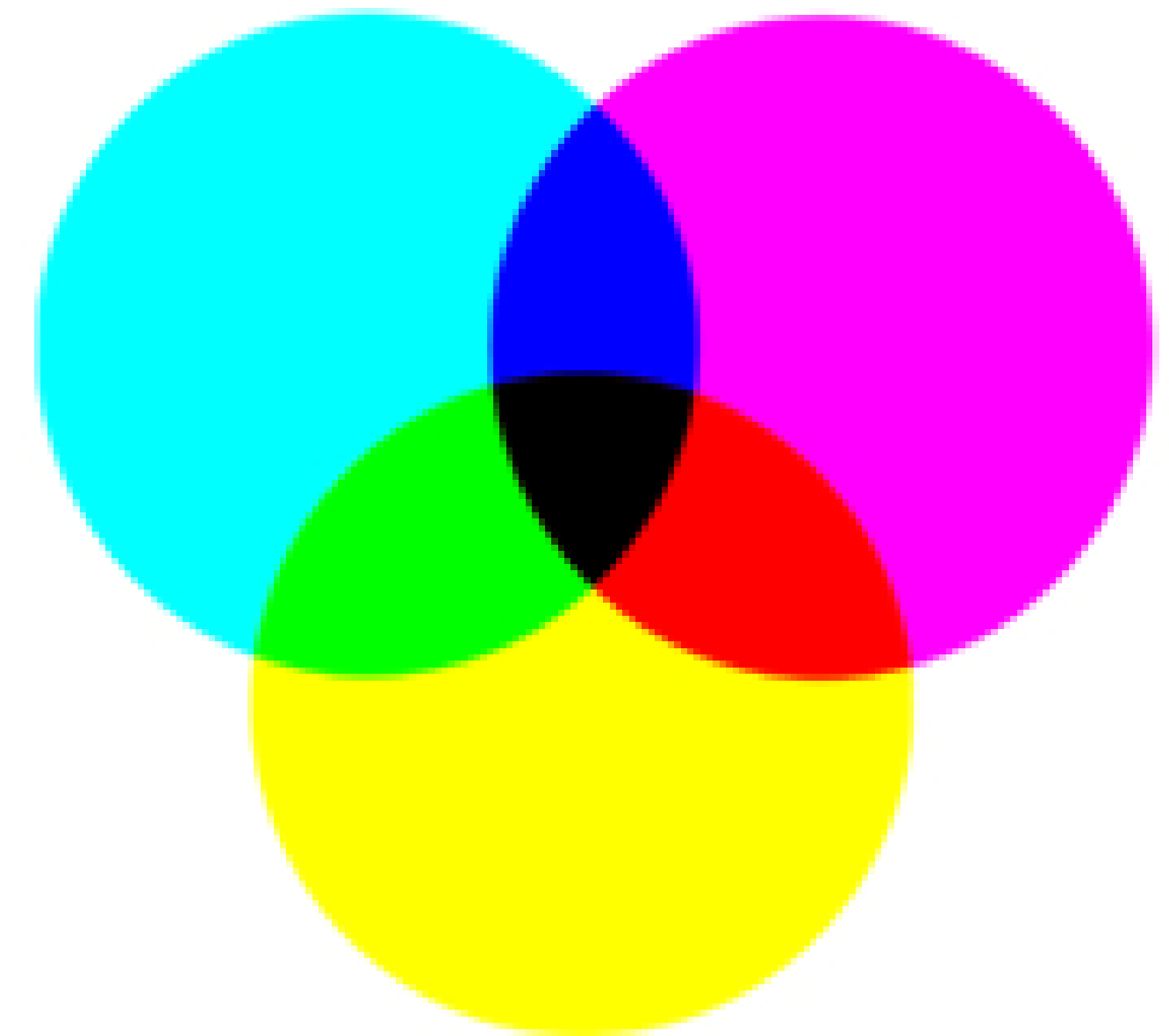
Subtractive Mixing (CMY Model)

C + M = B

magenta

cyan

C + M + Y = black

M + Y = R

C + Y = G

yellow
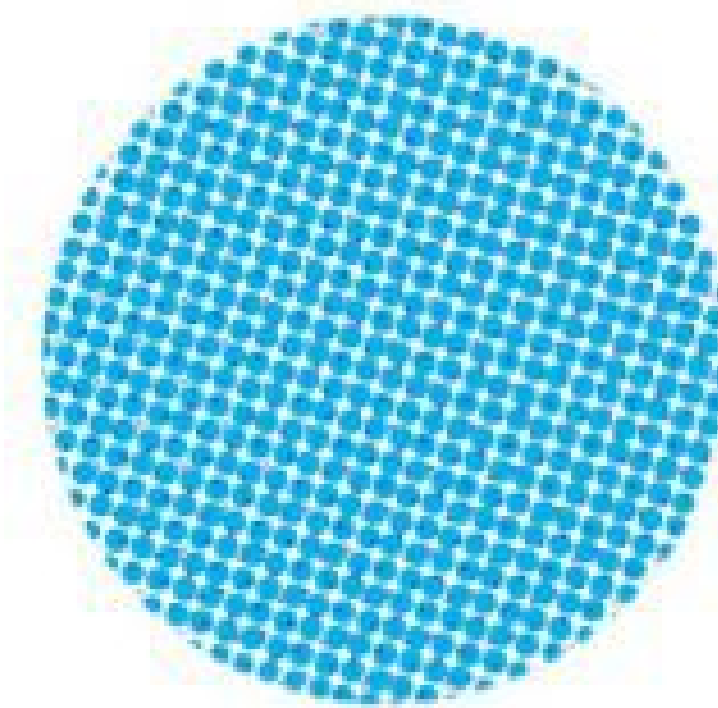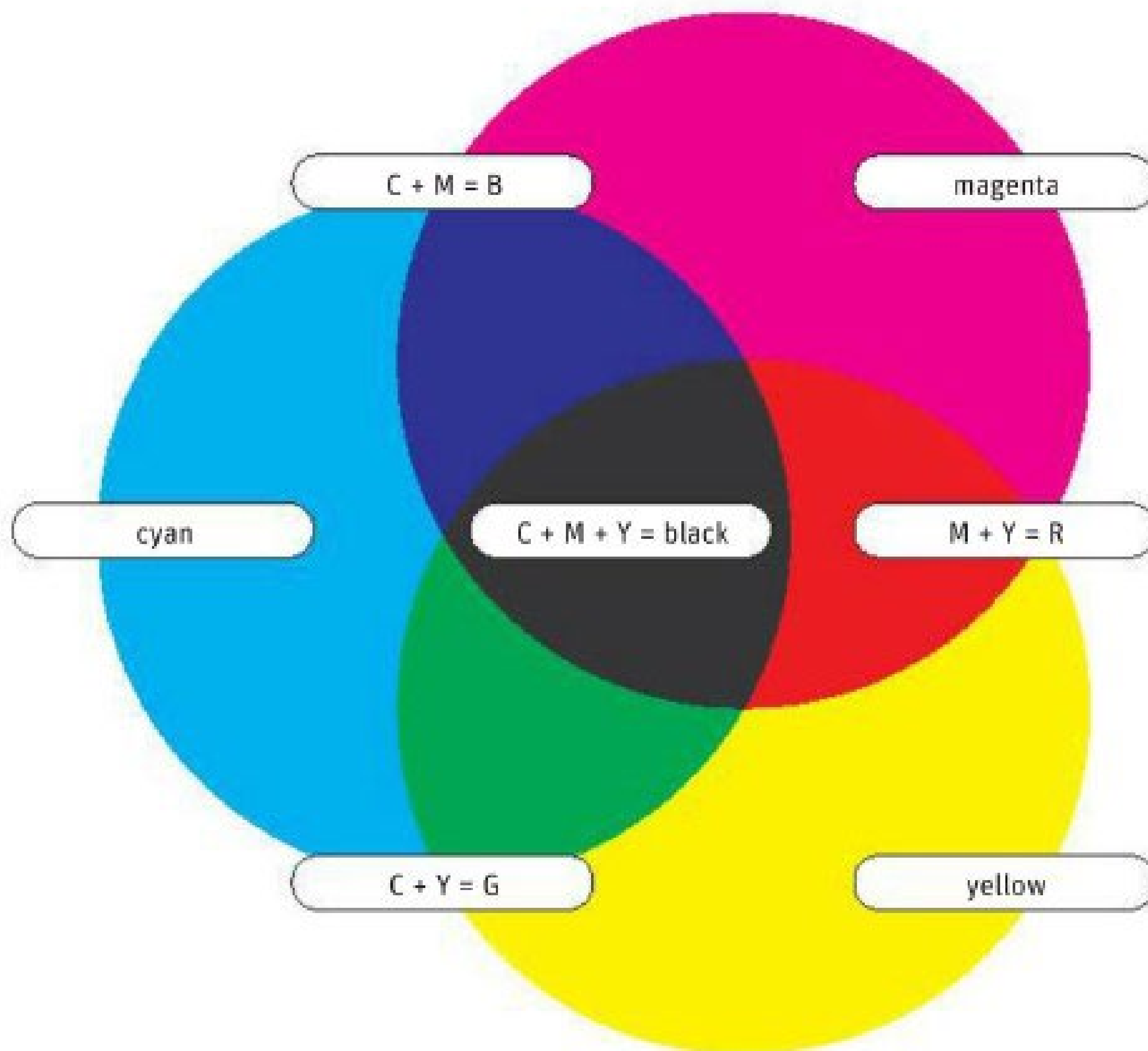
C	M	Y	K
68	3	0	0

C	M	Y	K
0	50	77	0

C	M	Y	K
63	0	97	0

PMS (Pantone® Matching System)

A Pantone é uma empresa que formula palhetas de cores que são referências principalmente na indústria gráfica. O sistema Pantone utiliza números para identificar suas cores, que facilita toda a identificação da cor durante todas as etapas de um processo, podendo ser utilizado pelo designer, fabricante, consumidor e revendedor, havendo a padronização das cores.

PANTONE®
298 U

PANTONE®
368 U

PANTONE®
1575 U

Tripleto Hexadecimal

Esse sistema possui esse nome pois cada cor consiste em um número de seis dígitos formado por três bytes em hexadecimal. Sendo que cada byte representa uma porção do RGB, sendo o byte 1: porção de vermelho, byte 2: porção de verde, e byte 3: porção de azul. Esse sistema é utilizado em HTML, CSS e em outros tipos de aplicações em computadores.

HEX
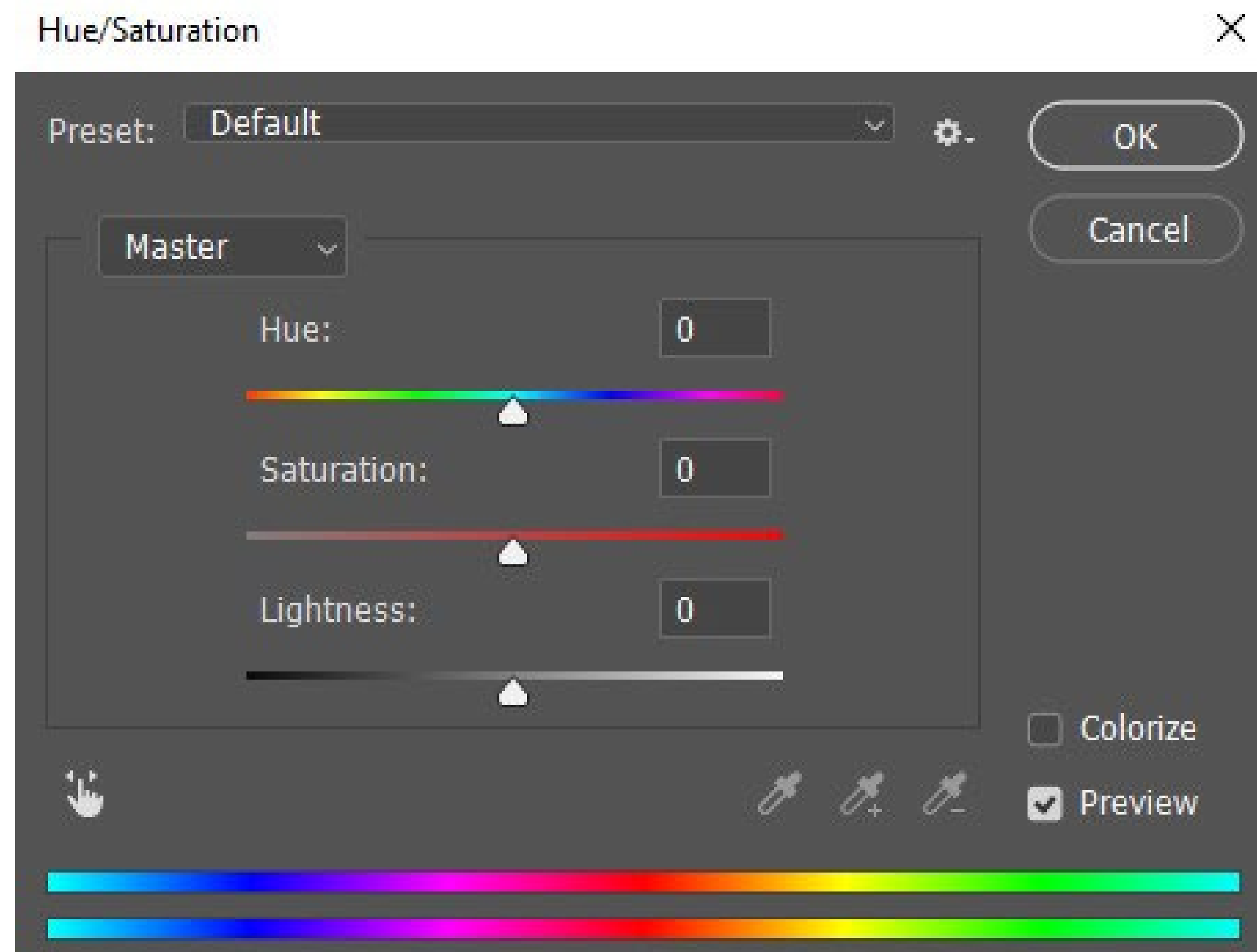#3DB7E4

HEX
#FF8849

HEX
#69BE28

Hue, Saturation Lightness

Extra
- Tom / Matiz / Hue
- Saturação / Saturation
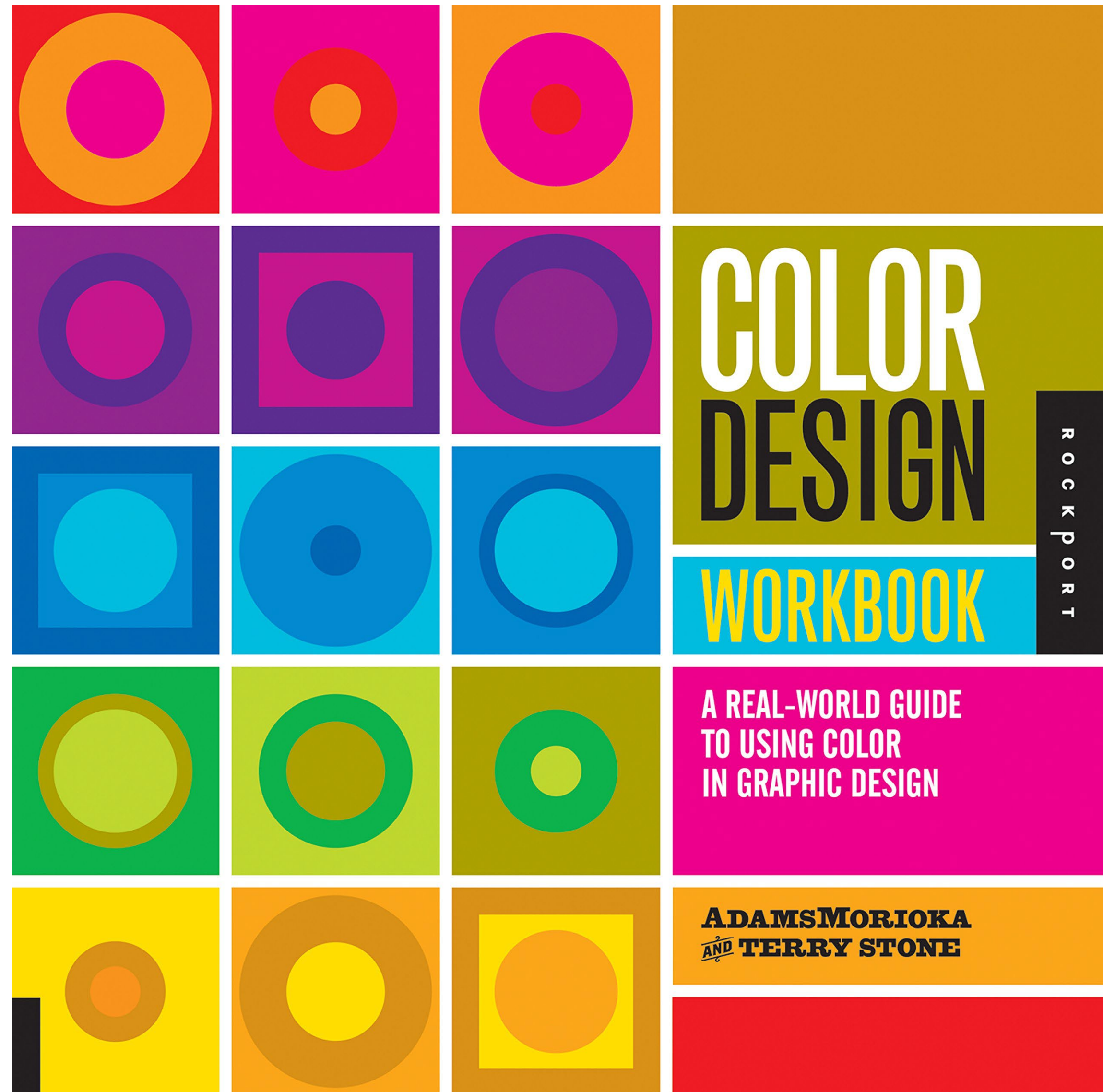- Brilho / Luminosidade / Lightness

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Referências básicas

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https://dribbble.com/

Ferramentas de cor online:
https://color.adobe.com/pt/create/color-wheel
www.paletton.com

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