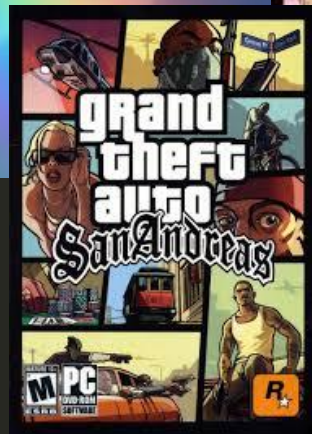
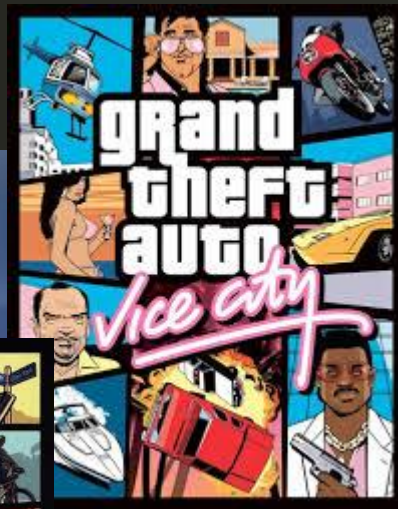
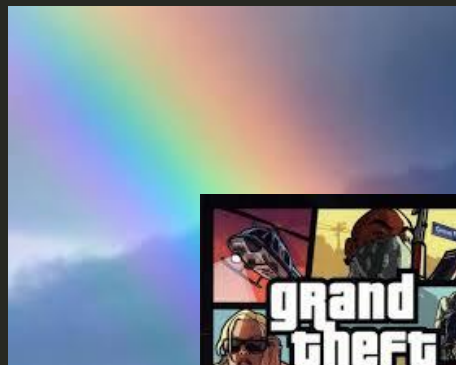


Desenvolvimento Baseado em Objetos

CORES e *Tipografia*



INSTITUTO FEDERAL
Rio Grande do Sul

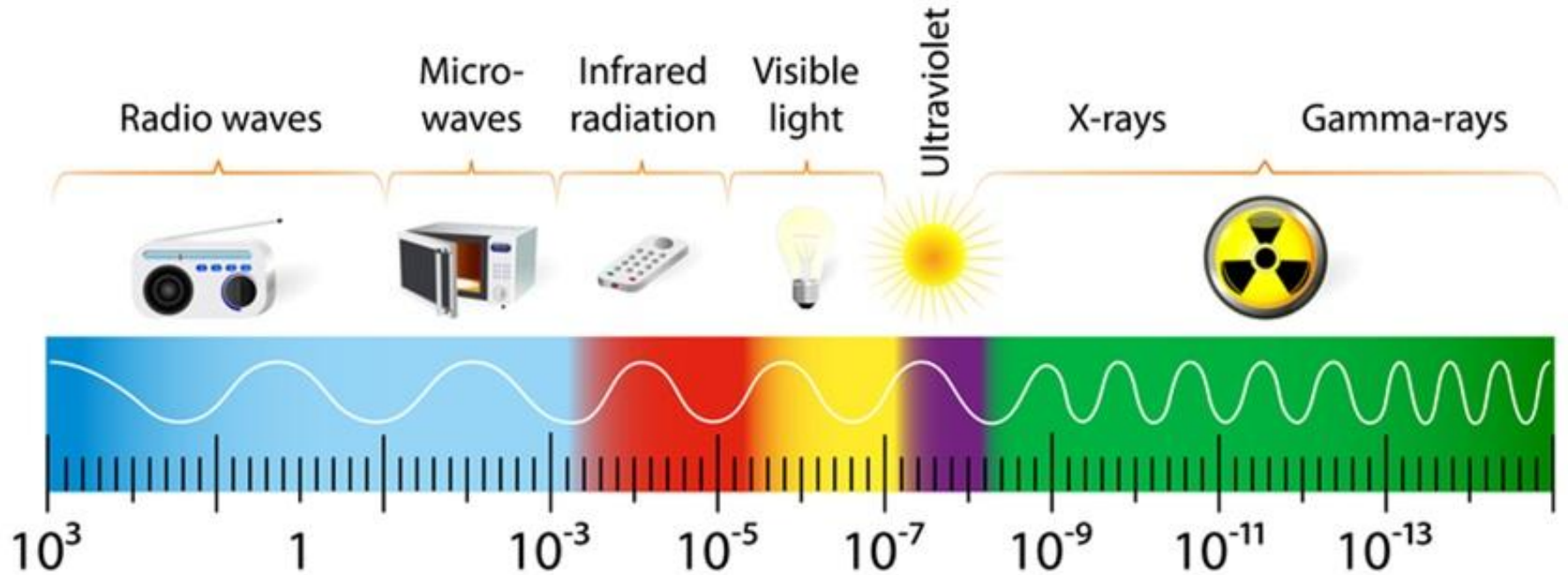
Campus
Rio Grande

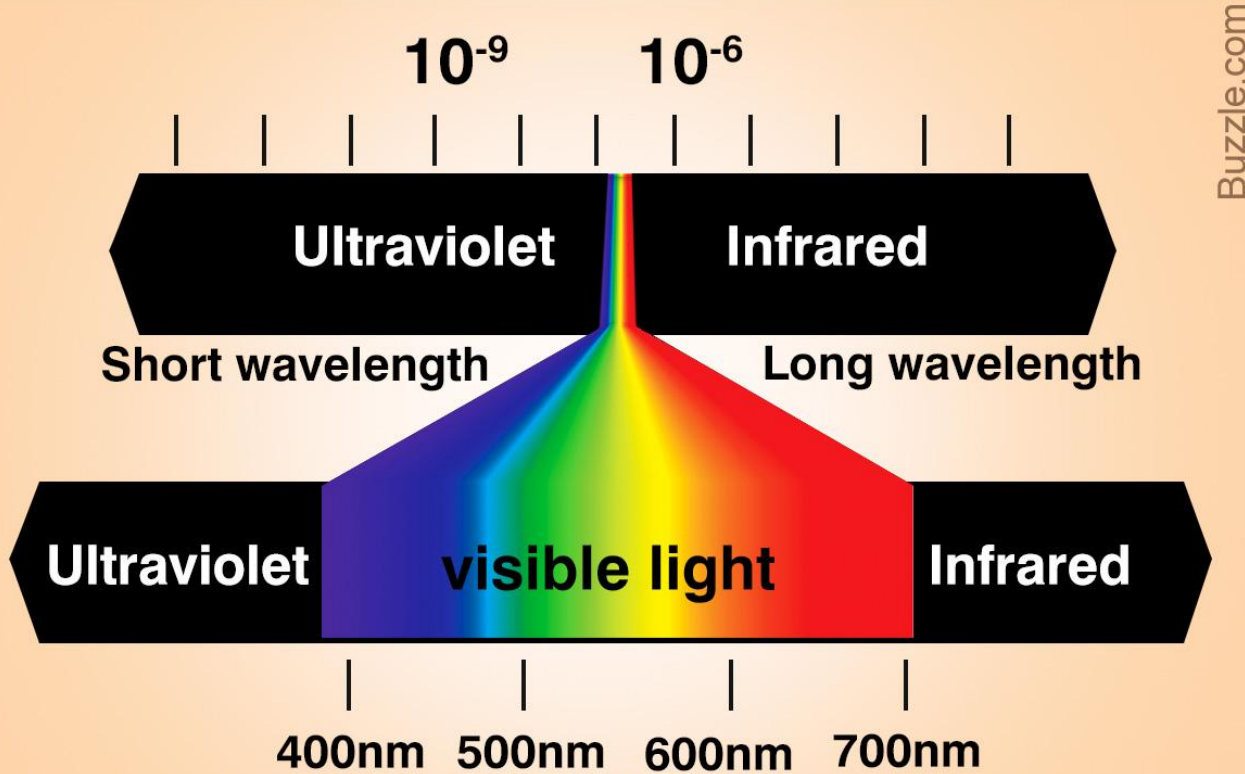


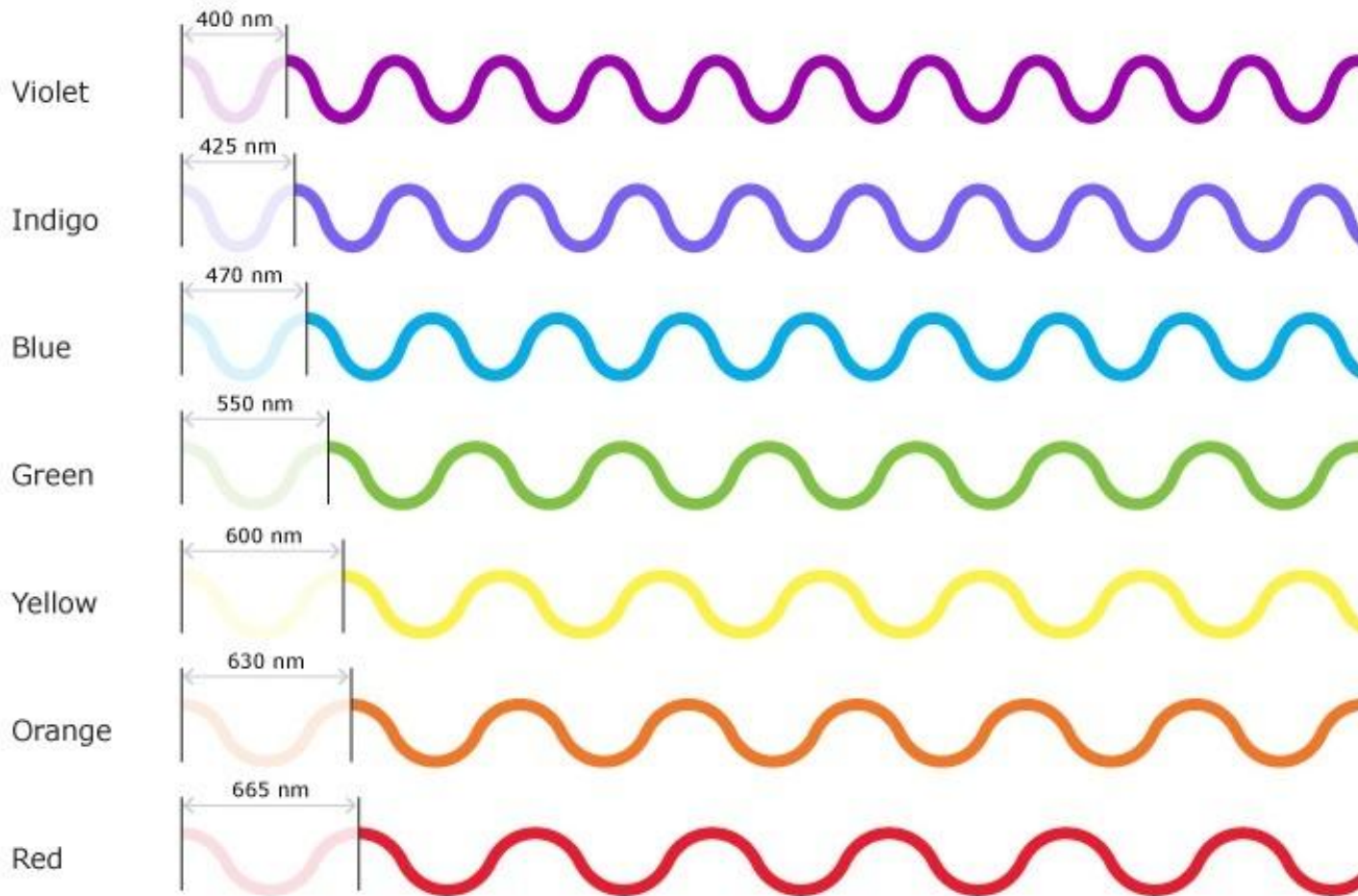


Radiação Eletromagnética

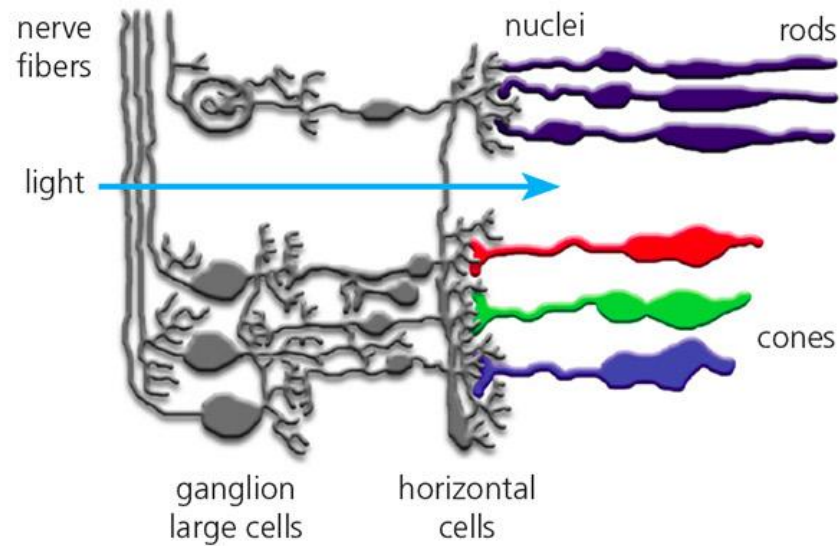
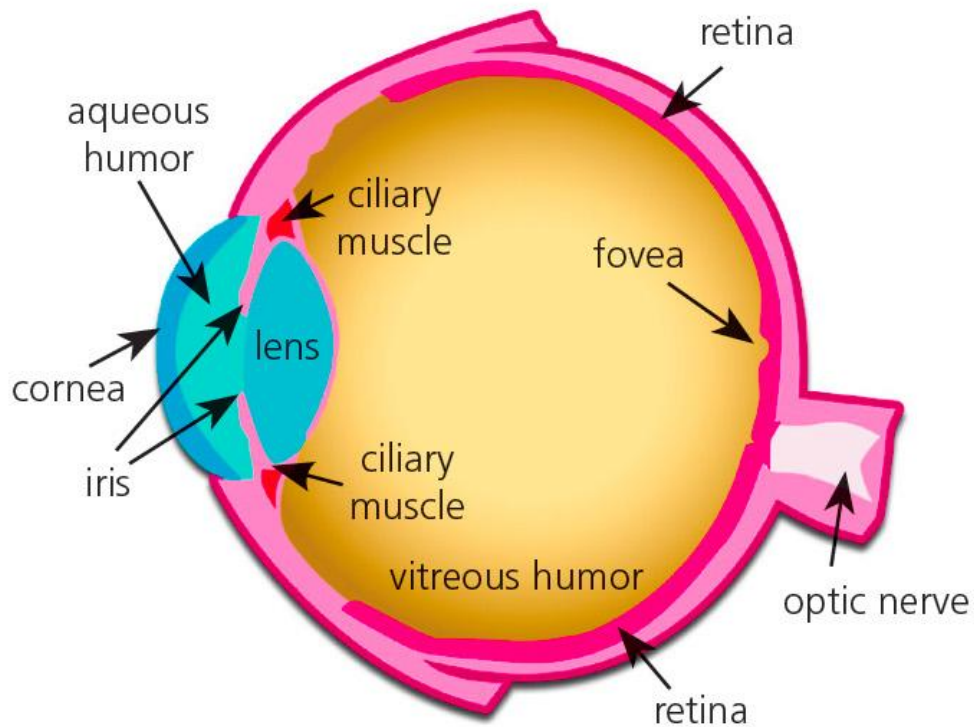
THE ELECTROMAGNETIC SPECTRUM

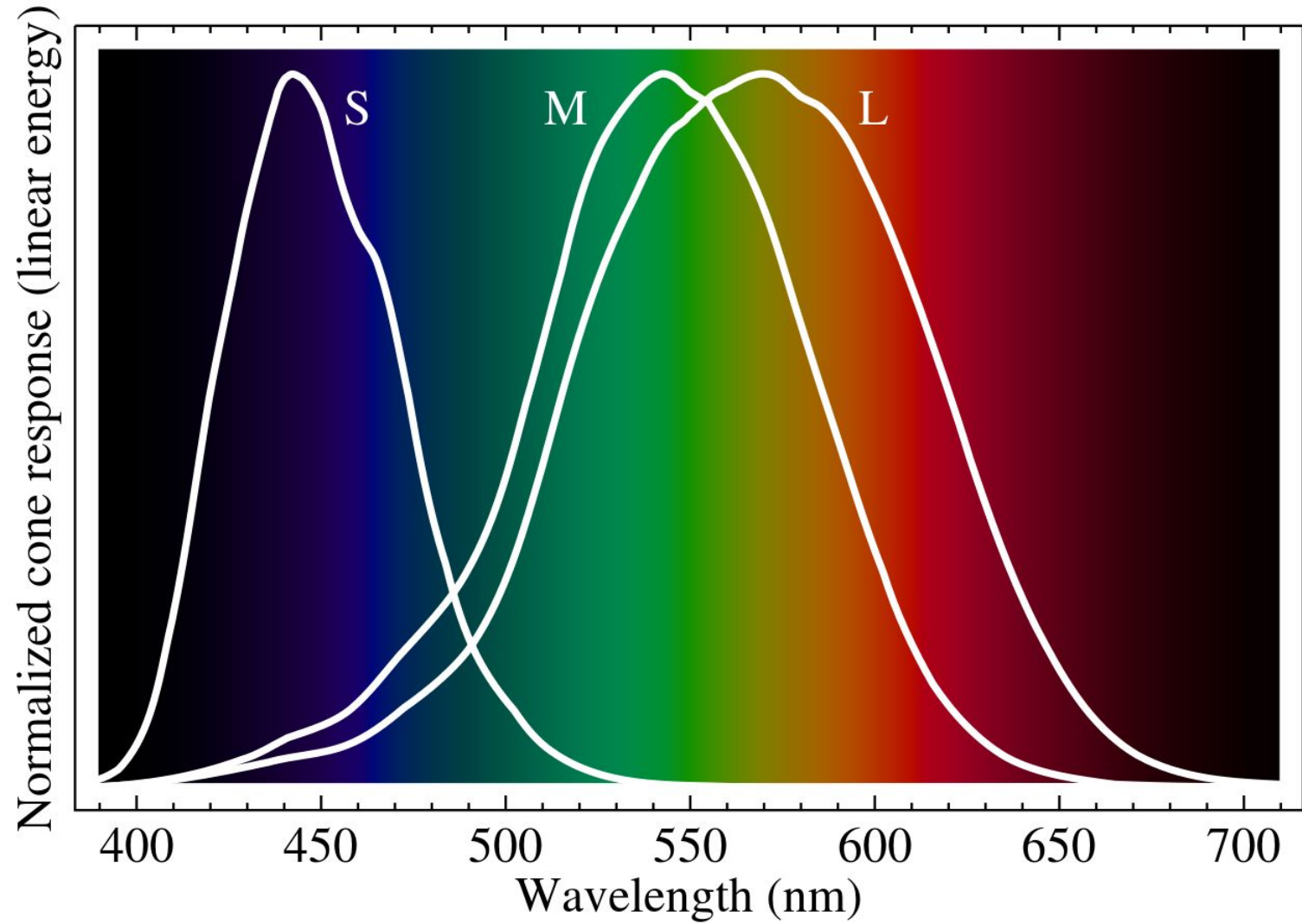






Percepção



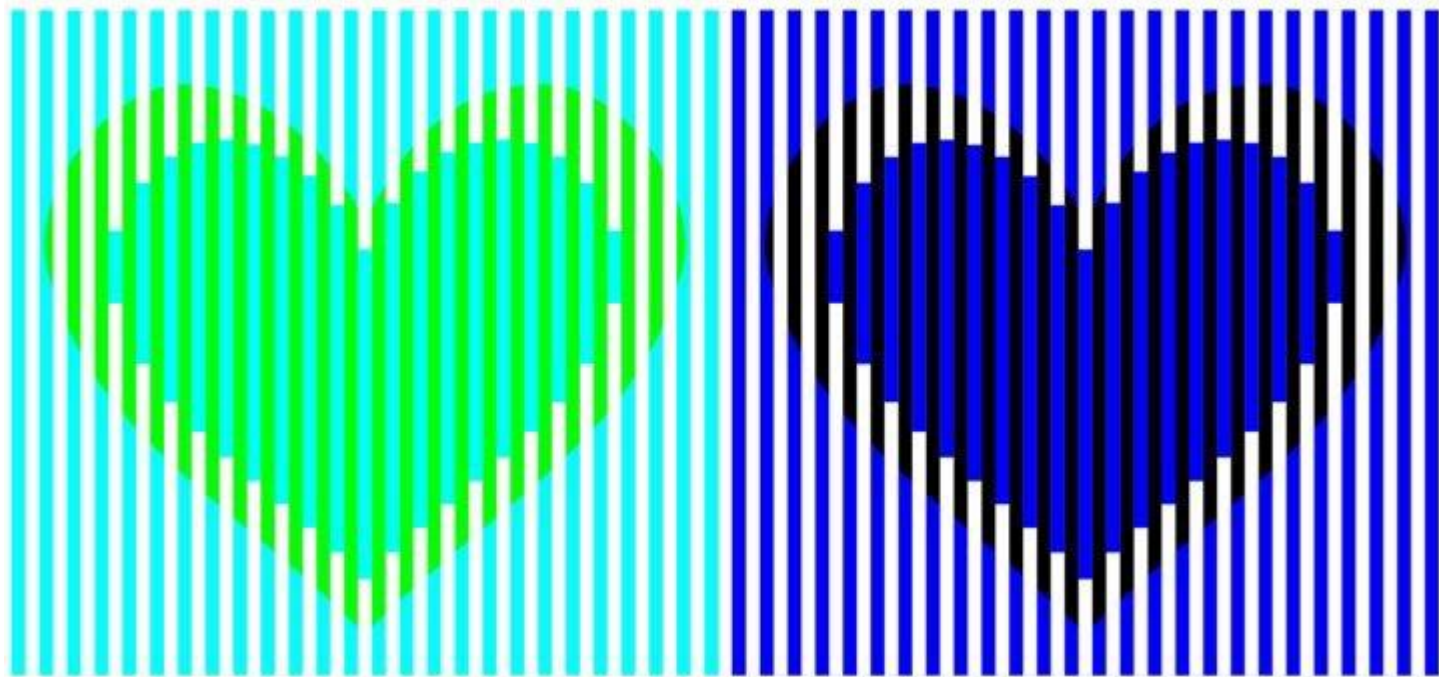


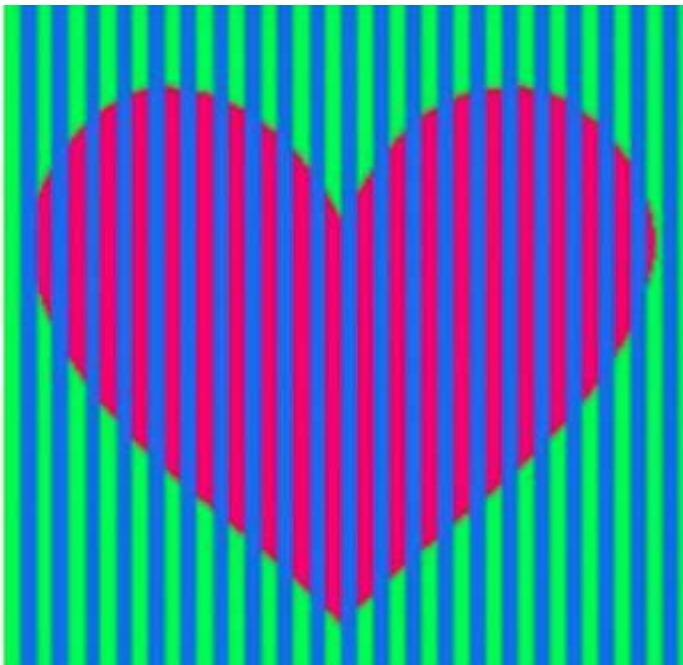
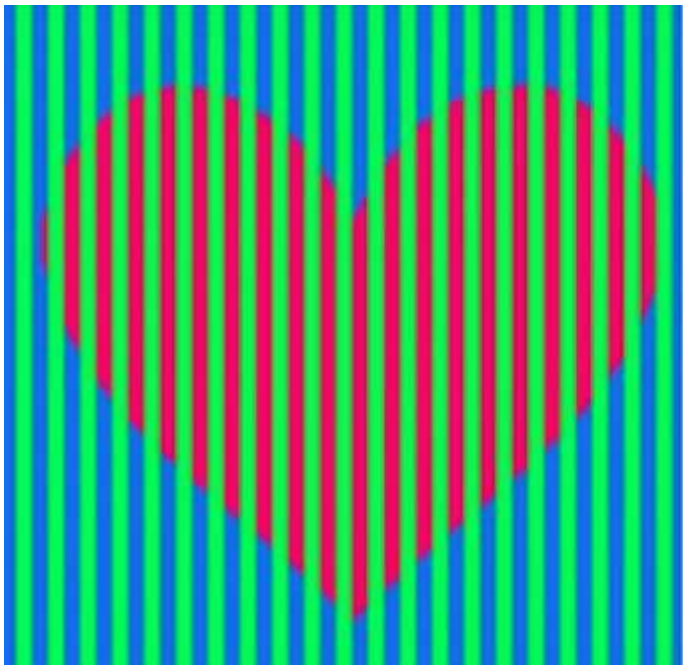
Cromatismo

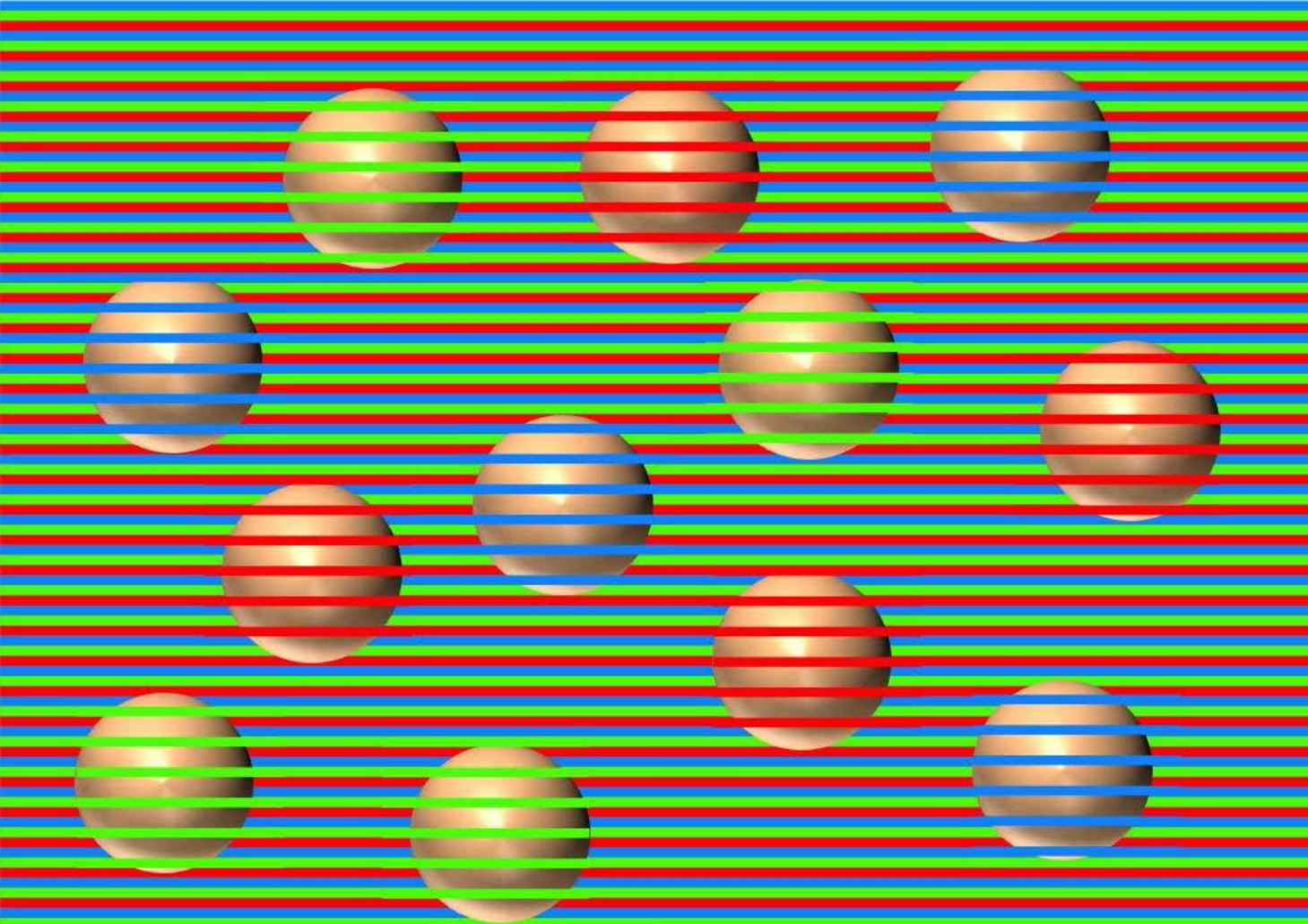
- Tricromatas (humanos e “parentes”)
- Dicromatas (placentários)
- Monocromatas (cetáceos, pinípedes, maníferos, ...)
- Tetracromatas (peixes, pássaros, ¡humanos!, ...)

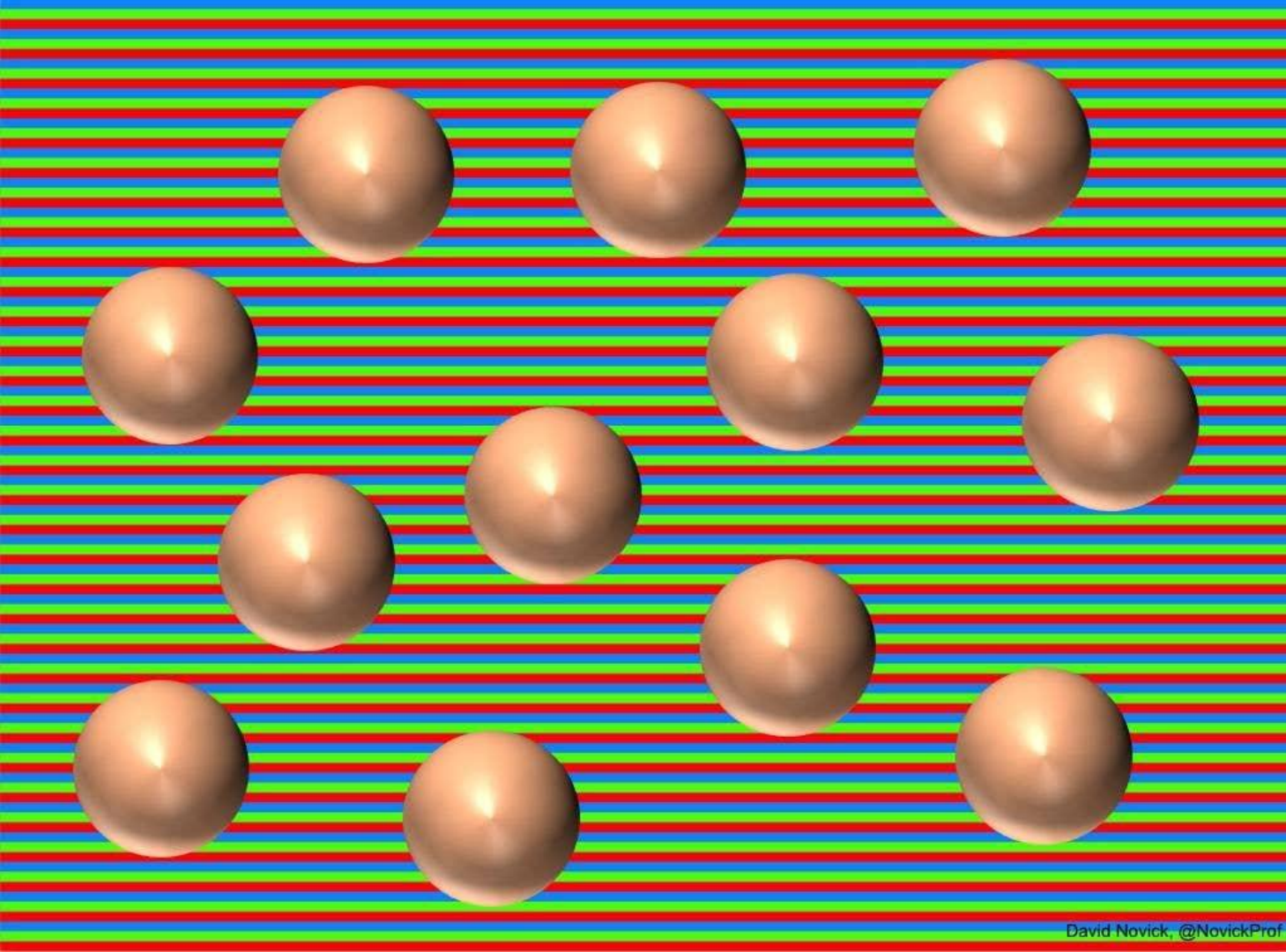


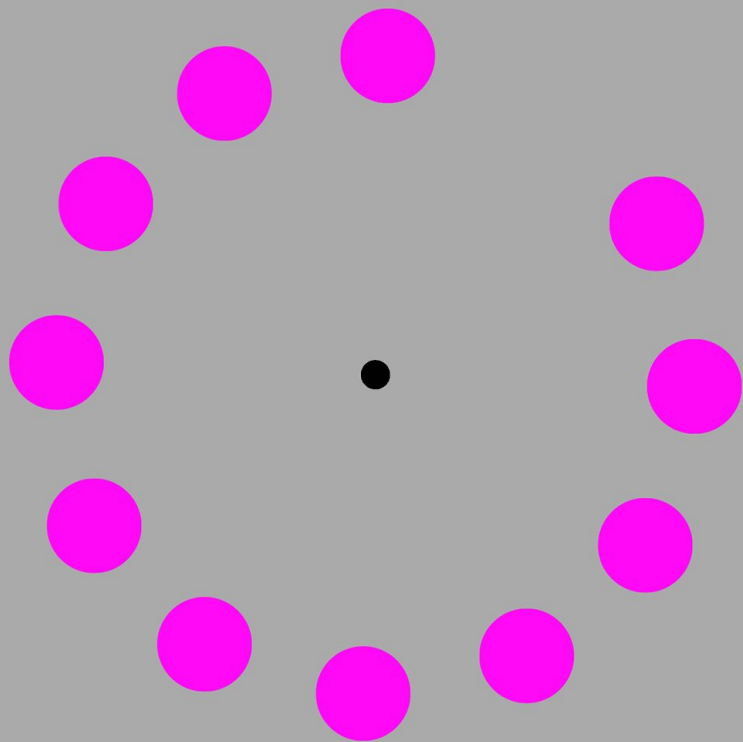
https://www.bbc.com/portuguese/noticias/2014/11/141029_vert_fut_cores_dg











Psicologia das Cores

A PSICOLOGIA DAS CORES

Verde

calma, tranquilidade, pacífico, saúde, crescimento, vida, cura, dinheiro

Azul

credibilidade, confiança, profissionalismo, segurança, força, paz, integridade

Roxo

cura, proteção, profundo, inteligente, imaginativo, real, luxo, dignidade

Amarelo

iluminação, abundância, cautela, clareza, calor, otimismo, alegria, amizade

Laranja

energia, desejo, calor, alegria, confiança

Vermelho

exigente, apaixonado, emocionante, juventude, perigo, desafiador, urgência

Cinza

equilíbrio, neutralidade, calma, estabilidade, força, segurança, personalidade, autoridade, maturidade

Preto

sofisticação, poder, formalidade, mistério

Branco

leveza, esperança, bondade, luz, pureza, limpeza, simplicidade

Rosa

romance, compaixão, fé, beleza, amor, sensibilidade

Dourado

riqueza, sucesso, status, generosidade, vida, sabedoria, carisma, otimismo

Marrom

estabilidade, confiança, acessibilidade, autenticidade, natural, orgânico

100

CLARITY
WARMTH

CHEERFUL
CONFIDENCE

**YOUTHFUL
BOLD**

IMAGINATIVE
WISE

DEPENDABLE
STRENGTH



GROWTH
HEALTH

NEUTR
CALM





CORES QUENTES

CORES FRIAS

Cores frias

As cores frias dão a sensação de calma, segurança e profissionalismo!

Cores quentes

As cores quentes são utilizadas para refletir paixão, felicidade, diversão e energia!

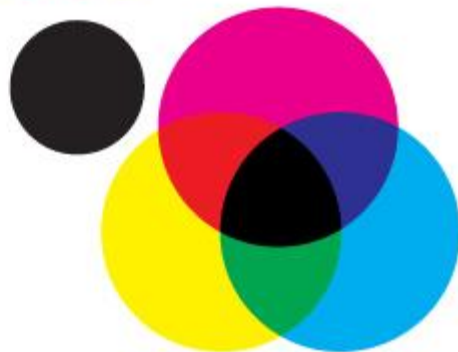


Sistema de Cores

R G B



C M Y K



CMYK

Cyan (ciano)

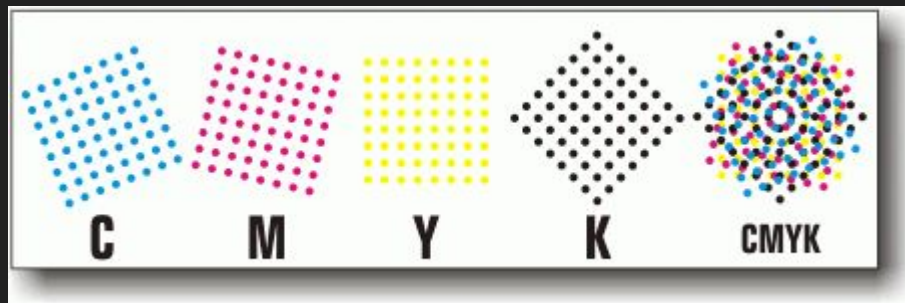
Magenta

Yellow (amarelo)

black

→ Sistema subtrativo por pigmentação

→ Produção de material impresso



RGB

Red (vermelho)

Green (verde)

Blue (azul)



→ Sistema aditivo por luz

→ Produção de painéis iluminados e telas

RGB

Red (vermelho)

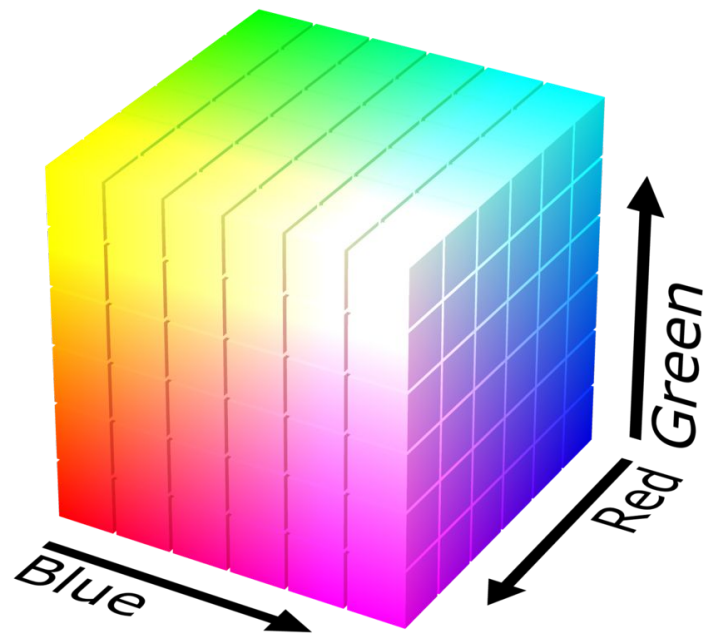
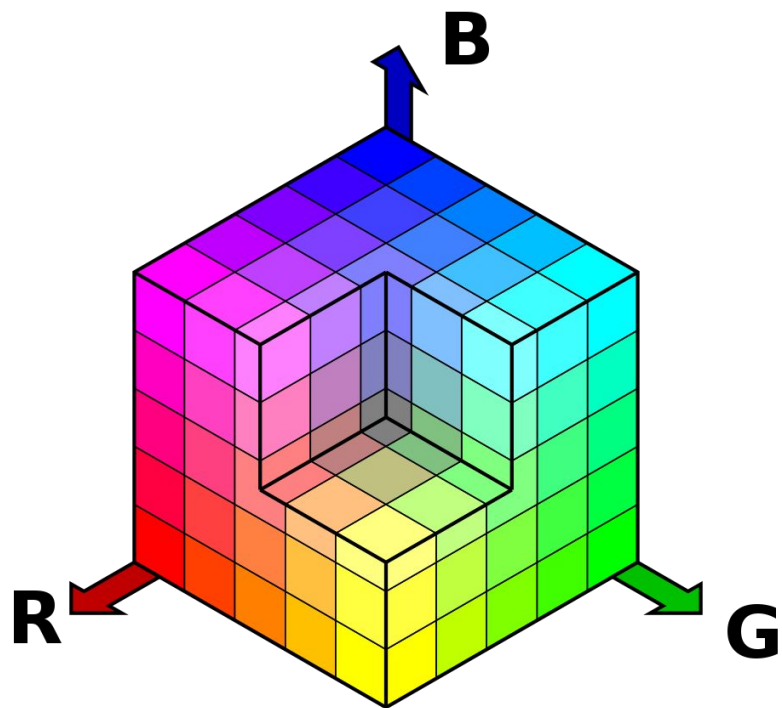
Green (verde)

Blue (azul)



→ Sistema aditivo por luz

→ Produção de painéis iluminados e telas



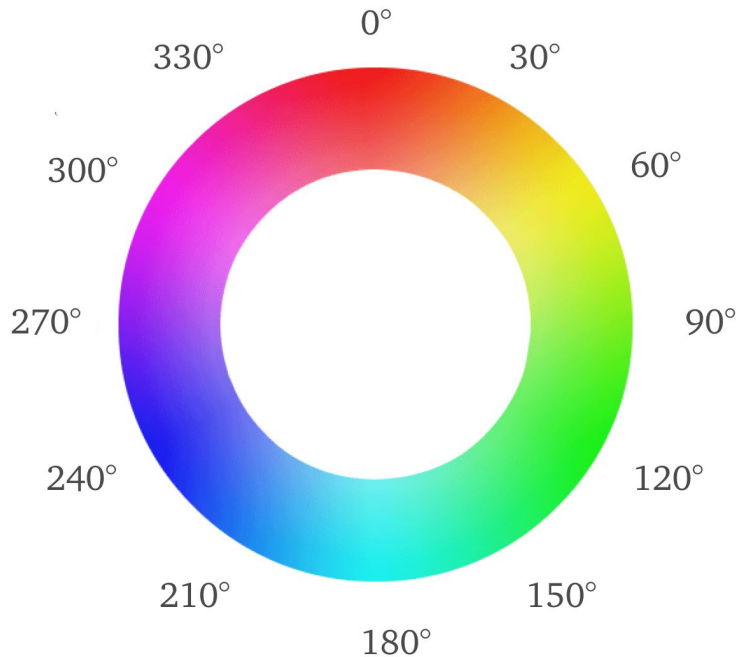
HSL

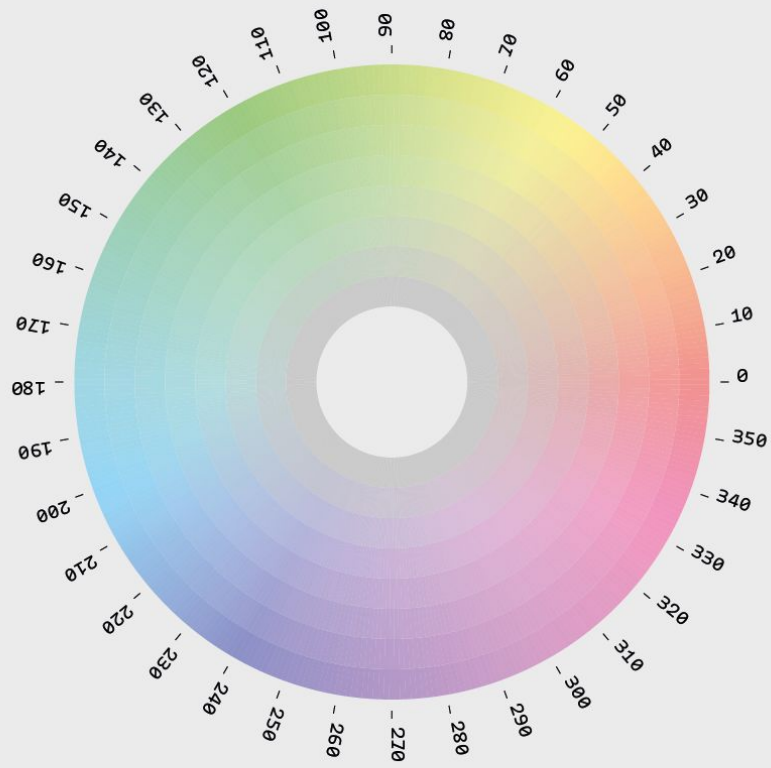
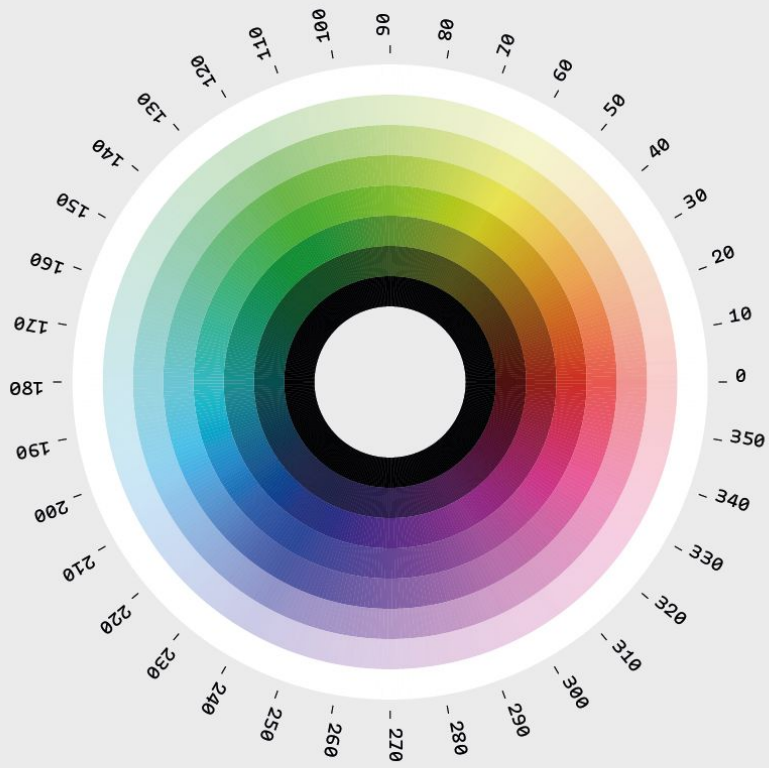
HUE (TONALIDADE)

SATURATION (SATURAÇÃO)

LIGHTNESS (LUMINOSIDADE)

→ Sistema alternativo ao RGB

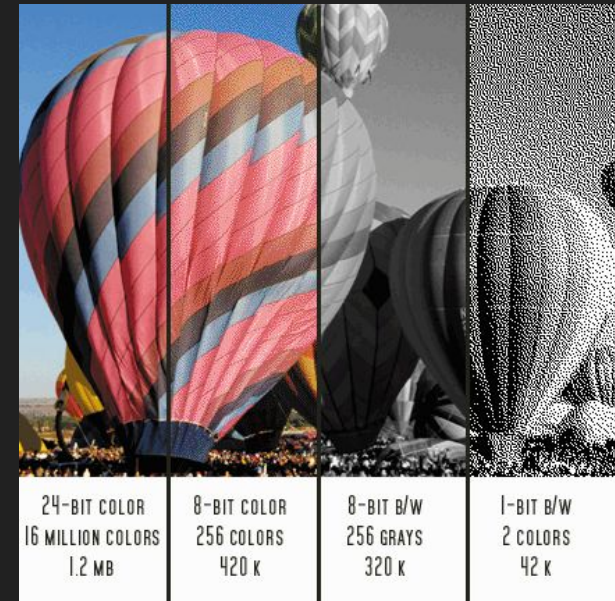
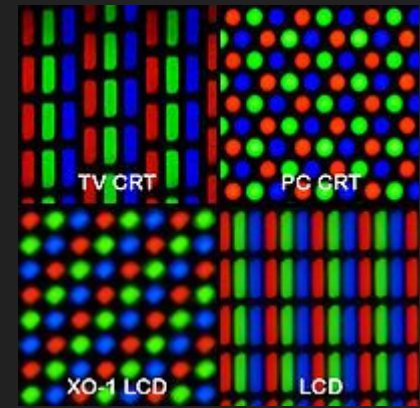




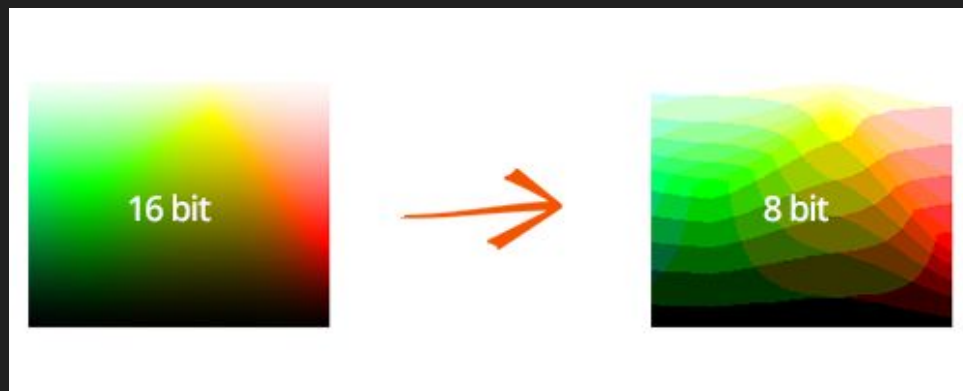
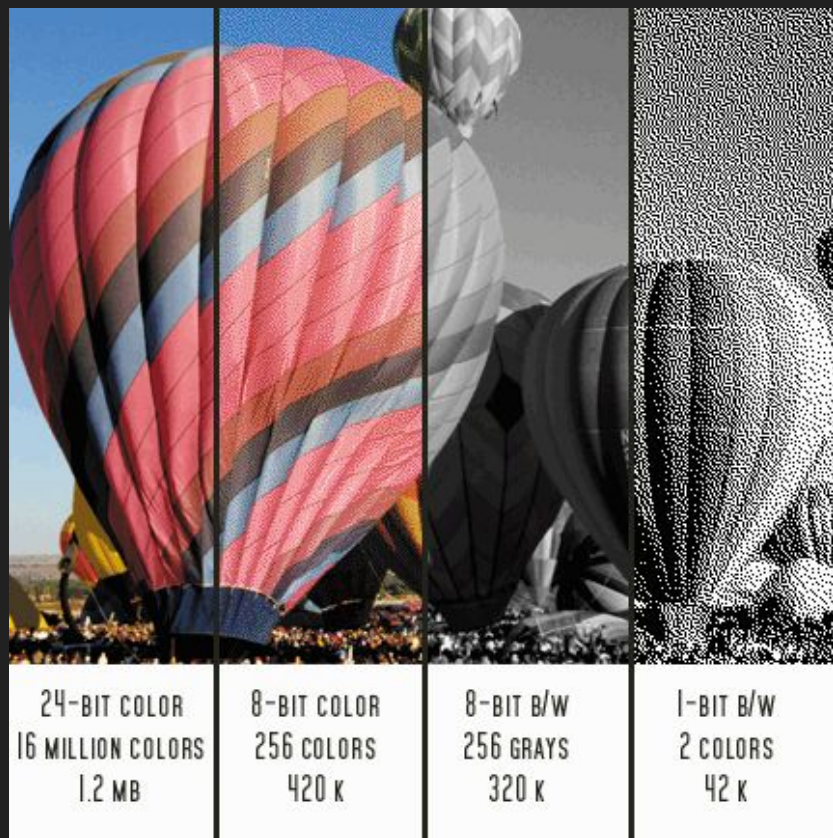
Cores Digitais/Web

Profundidade de Cor

- 1 bit ($2^1 = 2$ cores = monocromático)
- 8 bits ($2^8 = 256$ cores ou cinzas)
- 24 bits ($2^{24} = 16777216$ cores)



Profundidade de Cor



Cores em Binário | Usam RGB

24 bits

101011010011110101101111

3 grupos de 8

101011010011110101101111

10101101=128 + 0 + 32 + 0 + 8 + 4 + 0 + 1=173

00000000=0 ~ 11111111=255

Cores em Decimal | RGB

101011010011110101101111

= rgb(173, 61, 111)

rgb(0, 0, 0) = **BLACK**

rgb(255, 255, 255) = **WHITE**

x = 128, rgb(x, x, x) = **GRAY**

Cores em Hexadecimal | RGB

$$A5 = (10 \times 16) + (5 \times 1) = 165$$

$$5F = (5 \times 16) + (15 \times 1) = 95$$

$$1B = (1 \times 16) + (11 \times 16) = 27$$

rgb(165, 95, 27) = #A55F1B

Denary	Binary	Hex
0	0000	0
1	0001	1
2	0010	2
3	0011	3
4	0100	4
5	0101	5
6	0110	6
7	0111	7
8	1000	8
9	1001	9
10	1010	A
11	1011	B
12	1100	C
13	1101	D
14	1110	E
15	1111	F

Cores HSL

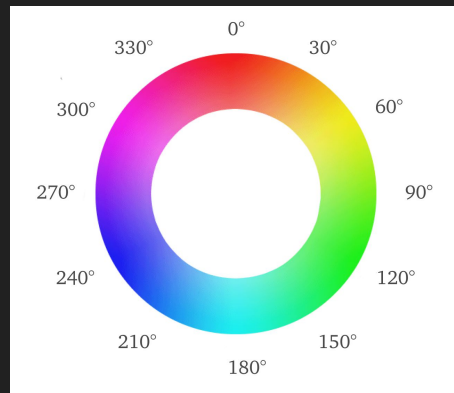
`rgb(174, 61, 112)`

`= #ae3d70`

`= hsl(333, 48%, 46%)`

`hsl(hue°, saturation%, lightness%)`

`hue = 333, saturation = 48%, lightness = 46%`



Vamos codar!



Paleta de Cores



Monocromático

Análogo

Complementar

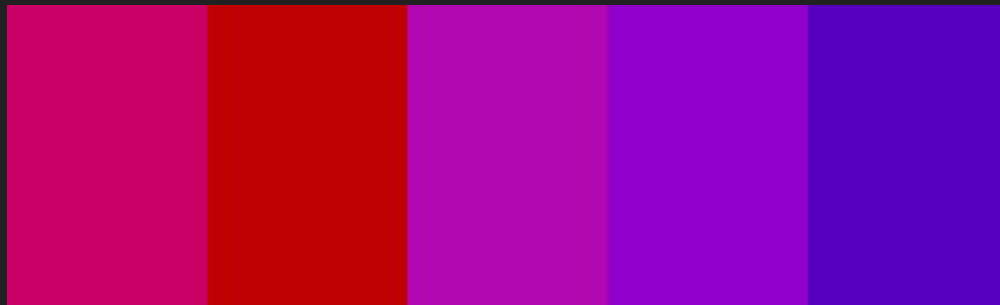


Paleta de Cores

Monocromático



Análogo



Complementar

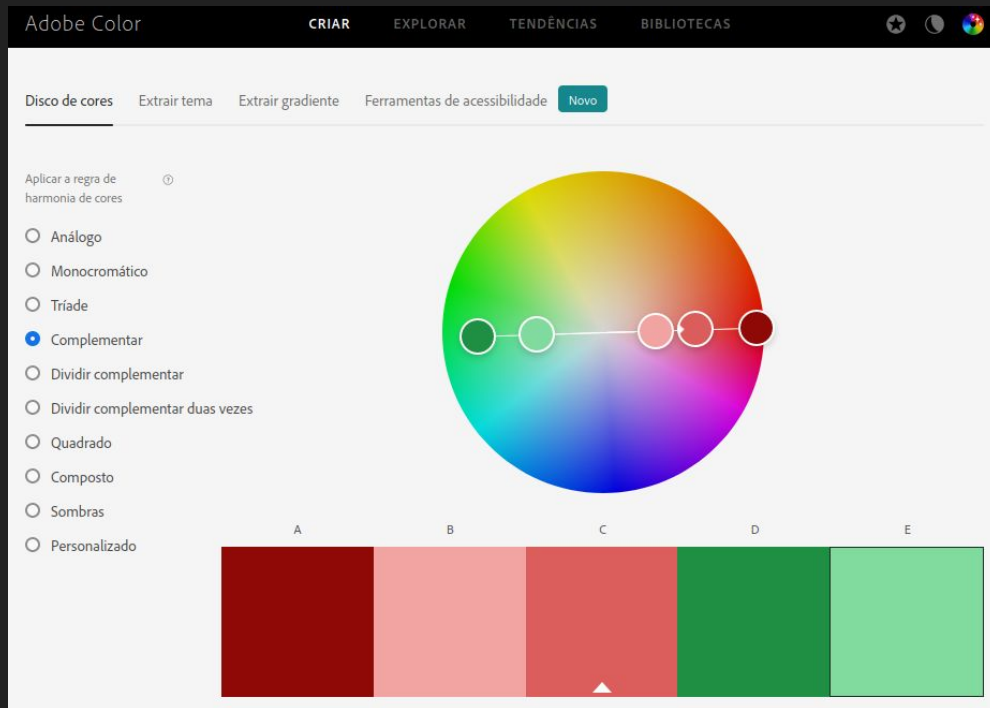


Paleta de Cores

Monocromático

Análogo

Complementar



Esquema Típico

Primary	Primary Variant	Secondary	Secondary Variant
1 #6200EE	2 #3700B3	3 #03DAC6	4 #018786

Background	Surface	Error
5 #FFFFFF	6 #FFFFFF	7 #B00020

On Primary		On Secondary	
8	#FFFFFF	9	#000000
On Background	On Surface	On Error	
10	#000000	11	#000000
		12	#FFFFFF

Contraste!

Color Contrast Checker

Calculate the contrast ratio of text and background colors.

TEXT COLOR

A1BEDF



BACKGROUND COLOR

97847A



CONTRAST

1.86

Very poor



Small text



Large text



Poor contrast for all text sizes. [Click to fix](#)

Quote n. 16

Even if you're on the right track, you'll get run over if you just sit there.

Will Rogers

<https://coolours.co/contrast-checker> <https://contrast-ratio.com/>

Vamos ~~codar~~ desenhar!

Web Designers



What my friends
think I do

Tipografia



FONTS MATTER.

Tipografia

A forma das letras (caracteres, na verdade)

Também chamados de tipos (ou *typeface*)

Uma (enorme) área de estudo em *design*

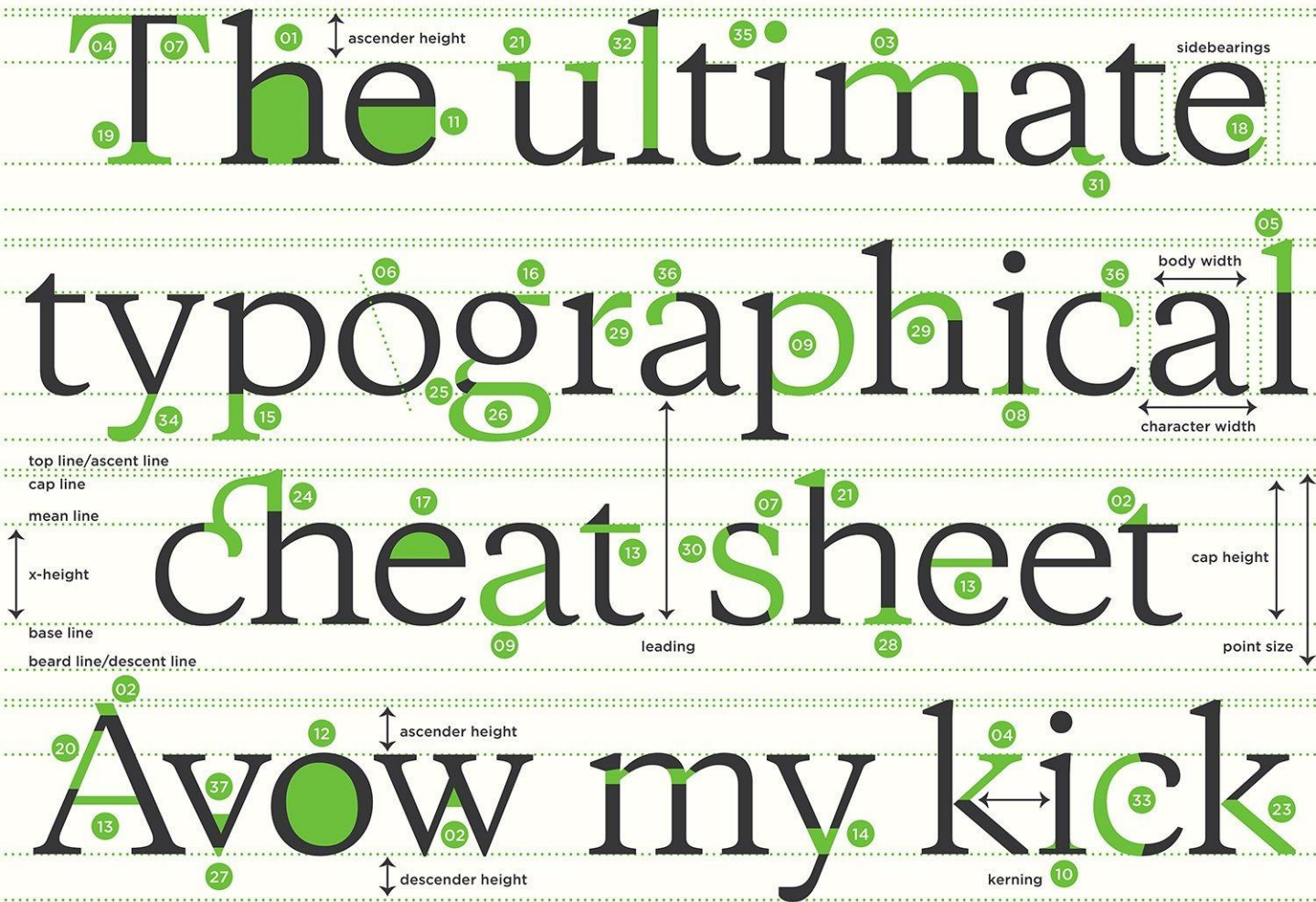
Glossary of terms

- | | |
|---------------------|----------------------|
| 01 APERTURE | 20 HAIRLINE (stroke) |
| 02 APEX | 21 HEAD SERIF |
| 03 ARC | 22 JOINT |
| 04 ARM | 23 LEG |
| 05 ASCENDER | 24 LIGATURE |
| 06 AXIS | 25 LINK/NECK |
| 07 BEAK | 26 LOOP |
| 08 BILATERAL SERIF | 27 OVERHANG |
| 09 BOWL | 28 SERIF |
| 10 BRACKET | 29 SHOULDER |
| 11 COUNTER (open) | 30 SPINE |
| 12 COUNTER (closed) | 31 SPUR |
| 13 CROSSBAR | 32 STEM |
| 14 CROTCH | 33 STRESS |
| 15 DESCENDER | 34 TAIL |
| 16 EAR | 35 TITTLE |
| 17 EYE | 36 TERMINAL |
| 18 FINIAL | 37 VERTEX |
| 19 FOOT | |

TYPEFACES USED

Galaxie Copernicus
Gotham

by Martin Silvertant



Classificação

Serif

Sans-serif

Mono-espaçada

Cursiva

Peso (weight)

Aa

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

a b c d e f g h i j k l m n o p q r s t u v w x y z

1 2 3 4 5 6 7 8 9 0

Light

Aa

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

a b c d e f g h i j k l m n o p q r s t u v w x y z

1 2 3 4 5 6 7 8 9 0

Medium

Aa

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

a b c d e f g h i j k l m n o p q r s t u v w x y z

1 2 3 4 5 6 7 8 9 0

Bold

Tipografia e as Cores

Primary

Secondary

Interactive

Disabled

Error

Primary

Secondary

Interactive

Disabled

Error

Primary

Secondary

Interactive

Disabled

Error

Primary

Secondary

Interactive

Disabled

Error

Tipos Famosos

The Quick Brown Fox in Franklin Gothic (1902)

The Quick Brown Fox in Gill Sans (1928)

The Quick Brown Fox in Helvetica (1957)

The Quick Brown Fox in Univers (1957)

The Quick Brown Fox in Arial (1982)

The Quick Brown Fox in Lucida Sans (1984)

The Quick Brown Fox in Century Gothic (1991)

The Quick Brown Fox in Tahoma (1995)

The Quick Brown Fox in Microsoft Sans Serif (2000)

The Quick Brown Fox in Corbel (2005)

The Quick Brown Fox in Calibri (2007)

Tipos Famosos

Rockwell

Georgia

Times New Roman

The Quick Brown Fox in Garamond (1530)

The Quick Brown Fox in Bodoni (1790)

The Quick Brown Fox in Baskerville (1757)

The Quick Brown Fox in Bookman (1850s)

The Quick Brown Fox in Century Schoolbook (1919)

The Quick Brown Fox in Times New Roman (1931)

The Quick Brown Fox in Rockwell (1934)

The Quick Brown Fox in Palatino (1949)

The Quick Brown Fox in Georgia (1993)

Tipos Famosos

The Quick Brown Fox in Bradley Hand

The Quick Brown Fox in Brush Script

The Quick Brown Fox in Chiller

The Quick Brown Fox in Edwardian Script

The Quick Brown Fox in French Script

The Quick Brown Fox in Freestyle Script

The Quick Brown Fox in Informal Roman

The Quick Brown Fox in Ink Free

The Quick Brown Fox in Kunstler Script

The Quick Brown Fox in Papyrus

das fontes



SERIF



Tradition

TIMES NEW ROMAN

RESPECTABLE

TRAJAN

Reliable *Comfort*

BASKERVILLE

GEORGIA ITALIC

SANS SERIF



Stability

HELVETICA BOLD

OBJECTIVE

FRANKLIN GOTHIC

Clean *Modern*

CALIBRI

MYRIAD ITALIC

SCRIPT



Elegance

BICKHAM SCRIPT

Affectionate

EDWARDIAN SCRIPT

Creativity

LAVANDERIA

MODERN



STRONG

FUTURA

Progressive

ITC AVANT GARDE EXTRA LIGHT

Stylish Chic

DIDOT ITALIC

CENTURY GOTHIC

DISPLAY



Friendly

COOPER

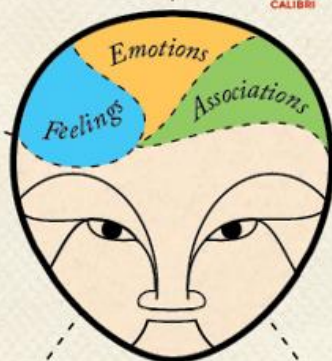
EXPRESSIVE

VALENCIA

Amusing

unique

SPACEAGE ROUND



Bora Codar

