Class #4

DIGITAL MEDIA FOUNDATIONS

Class #4

DESIGN PRODUCTION: RESOLUTION, COMPRESSION & IMAGE FILE FORMATS

Today's agenda

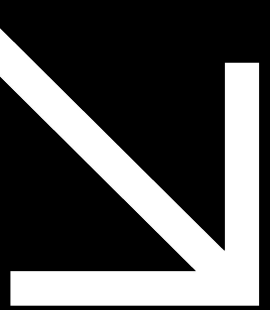
Design Production: Resolution, Compression & Image File Formats

Homework Reviews

Homework: Design Assignment - Poster Design - Move to design!

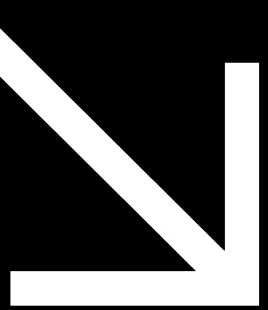
Next Class: Color Theory

Design Production: **Resolution, Compression & Image File Formats**



Let's Discuss:

What is Resolution?



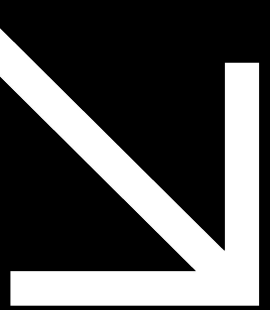
Definition:

In digital photography, resolution is the level of detail contained in an image. More specifically, it refers to the number of pixels that exist within that image. The higher the resolution, and the richer the pixel count, the more detail and definition you will see.

300dpi
72dpi
10dpi

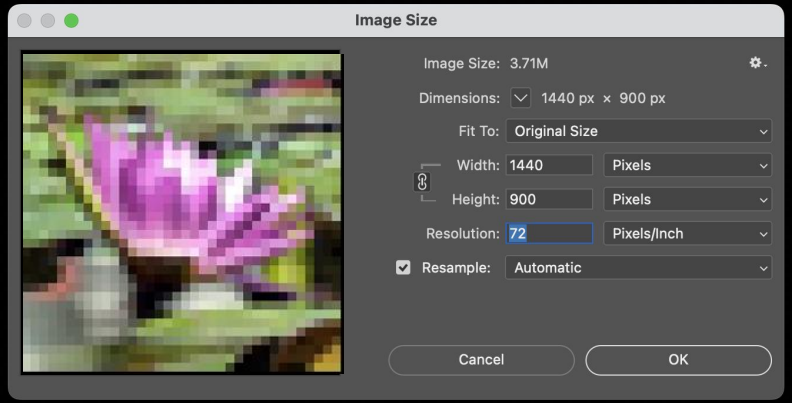
Let's Discuss:

What the difference between Screen Resolution & Print Resolution



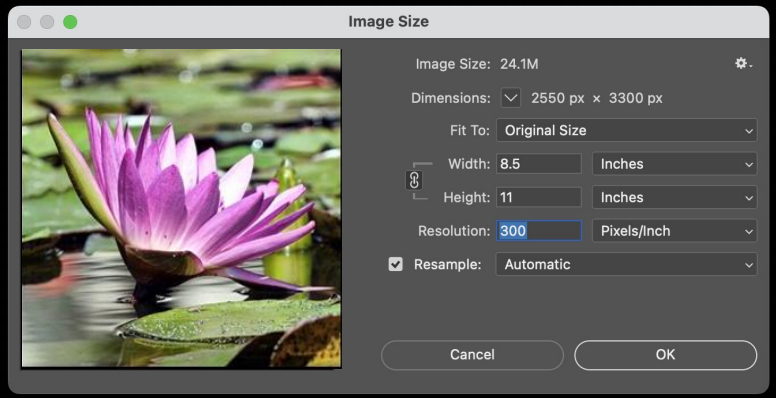
Screen Resolution

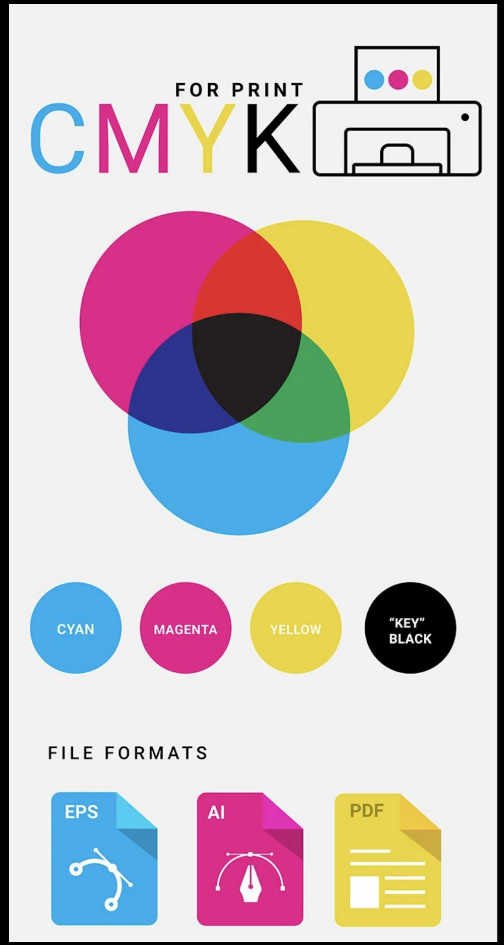
- PPI (**pixels** per inch)
- Recommended minimum **72 DPI**
- File types: JPG, PDF, GIF, PNG
- File size: **Light**
- Colors: RGB

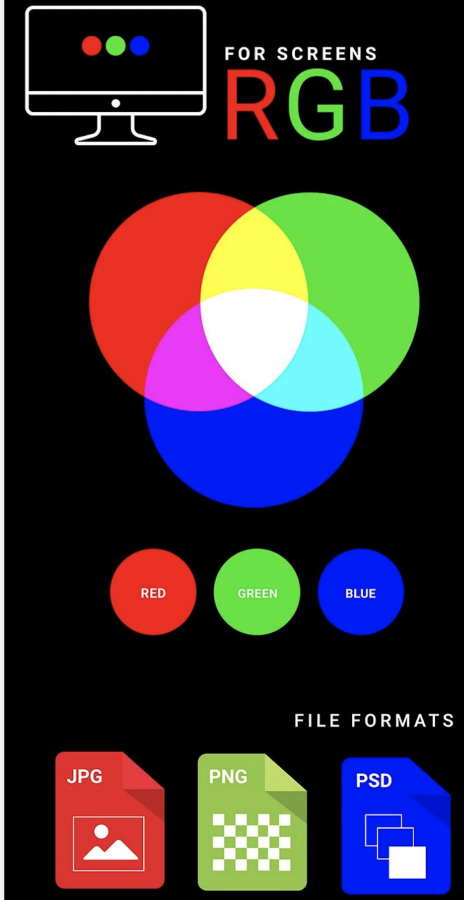


Print Resolution

- DPI (**dots** per inch)
- Recommended minimum **300 DPI**
- File types: AI, PSD, EPS, JPG, PDF, TIF
- File size: **Heavy**
- Colors: CMYK

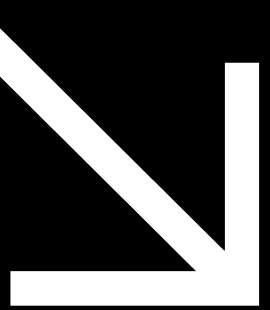



FOR PRINT
CMYK
CYAN
MAGENTA
YELLOW
"KEY" BLACK
FILE FORMATS
EPS
AI
PDF


FOR SCREENS
RGB
RED
GREEN
BLUE
FILE FORMATS
JPG
PNG
PSD

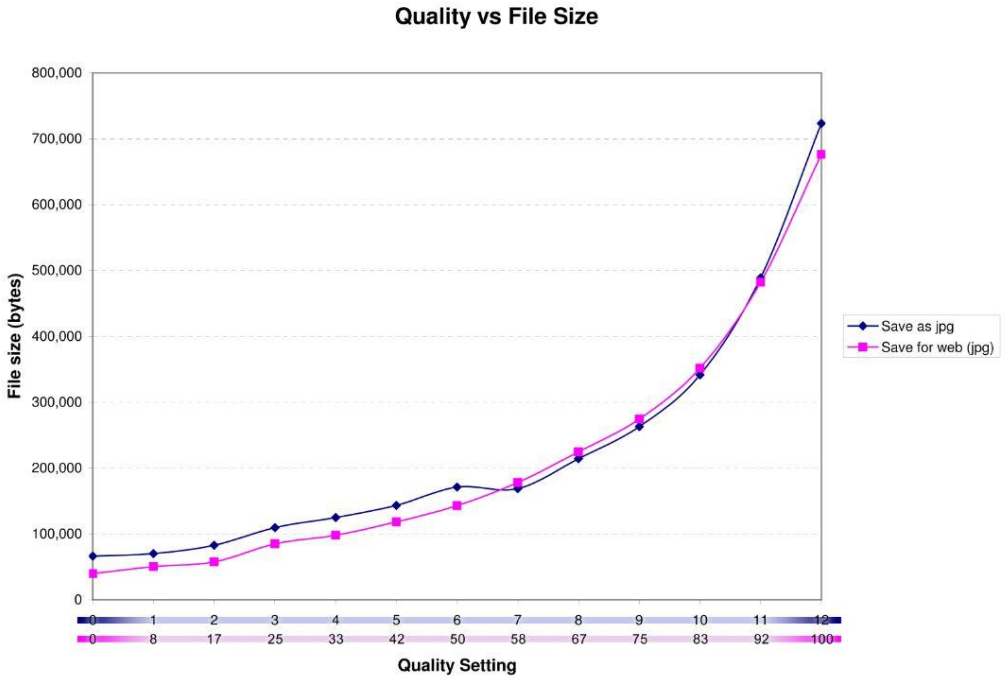
Let's Discuss:

What is Image/Video Compression?



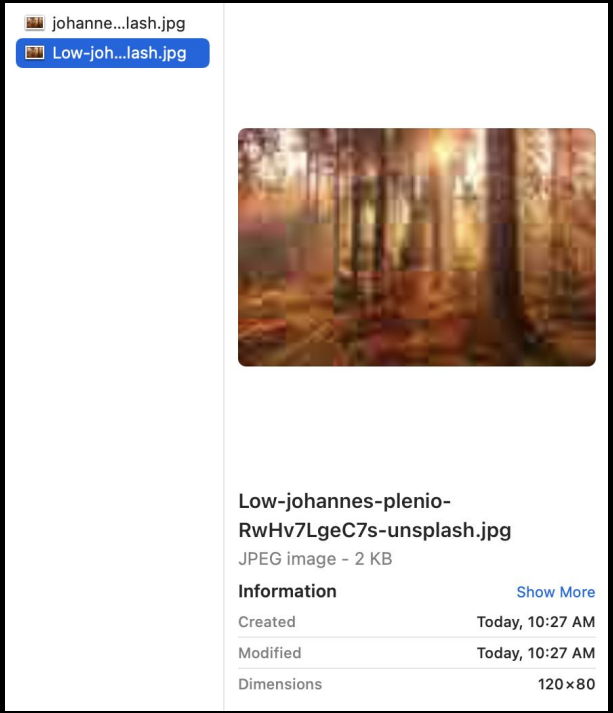
Definition:

Image compression is a type of data compression applied to digital images, to reduce their cost for storage or transmission.

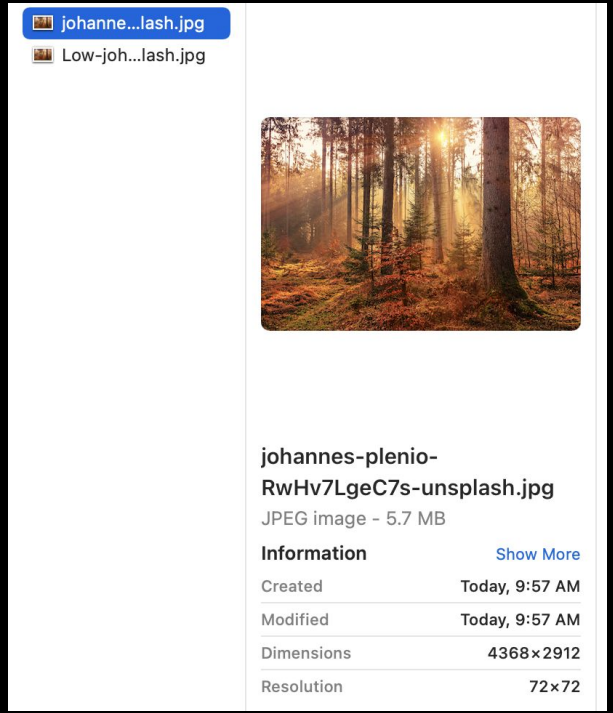

Quality vs File Size
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
File size (bytes)
0 1 2 3 4 5 6 7 8 9 10 11 12
0 8 17 25 33 42 50 58 67 75 83 92 100
Quality Setting
Save as jpg
Save for web (jpg)

Saved as jpg
0 quality, 64.6KB
6 quality, 167.1KB
12 quality, 706.4KB
Saved for web jpg
0 quality, 38.8KB
50 quality, 139.5KB
100 quality, 660.4KB

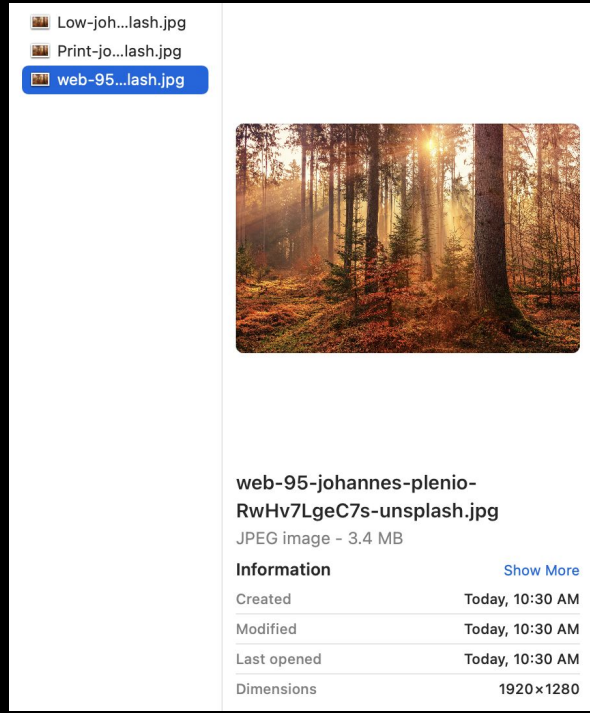
Saved as jpg
0 quality
1 quality
2 quality
3 quality
4 quality
5 quality
6 quality
Saved for web jpg



Poor Quality



Print Quality



Web Quality

Save for Web (100%)

Tip: Use File > Export > Export As... or right click on a layer for a faster way to export assets

Learn More

Original | Optimized | 2-Up | 4-Up

Preset: [Unnamed]

JPEG

Very High — Quality: 95

Progressive — Blur: 0

Optimized — Matte:

Embed Color Profile

Convert to sRGB

Preview: Monitor Color

Metadata: Copyright and Contact Info

Color Table

Image Size

W: 1920 px

H: 1280 px

Percent: 43.96 %

Quality: Bicubic

Animation

Looping Options: Forever

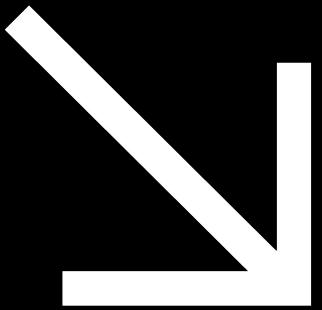
1 of 1

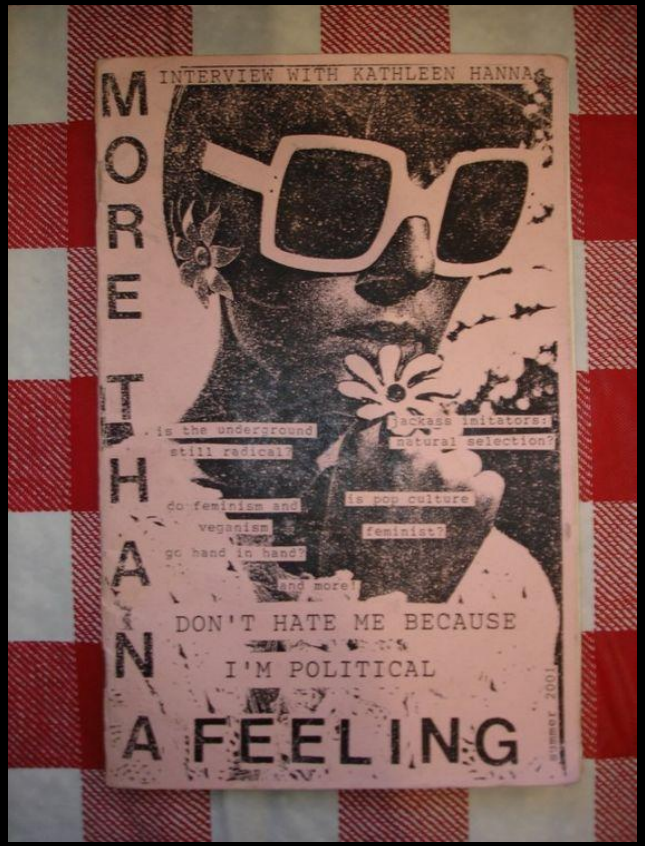
JPEG
3.239M
601 sec @ 56.6 Kbps

95 quality

Let's Discuss:

Are pixelated or low quality images bad?




INTERVIEW WITH KATHLEEN HANNA
MORE THAN A FEELING
is the underground still radical?
jackass imitators: natural selection?
do feminism and veganism go hand in hand?
is pop culture feminist?
and more!
DON'T HATE ME BECAUSE I'M POLITICAL
summer 2001

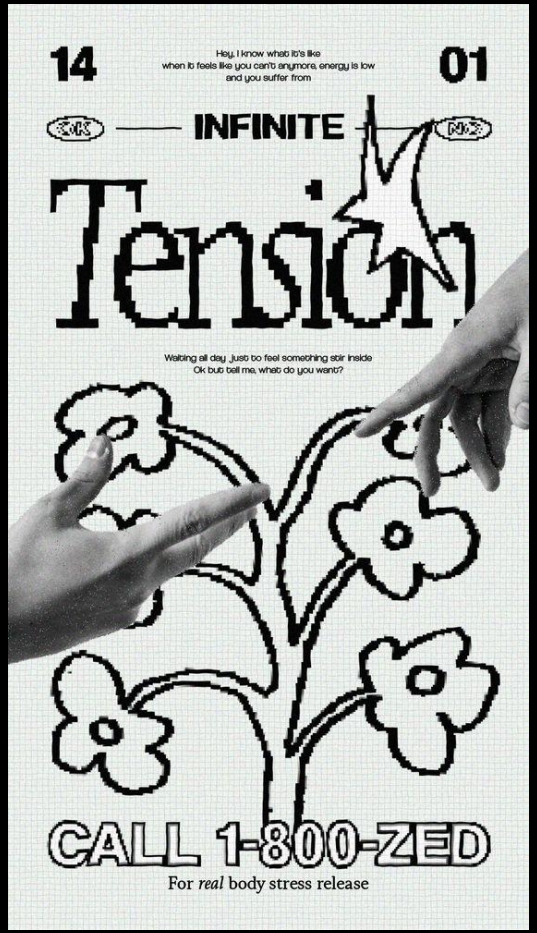
NEW
incredibüll !!
FÜNZEEN
COMPETITION
Summer '86
No 1
PÜNK
HALF MAN HALF BISCUIT
WEDDING PRESENT
Housemartins
Chumbawamba
Three Johns
FOR BOYS AND GIRLS
Red Letter Day
Intelligence
also Frank Sidebotton Membranes, MEL-O-TONES & Redskins
FÜN

Let's Discuss:

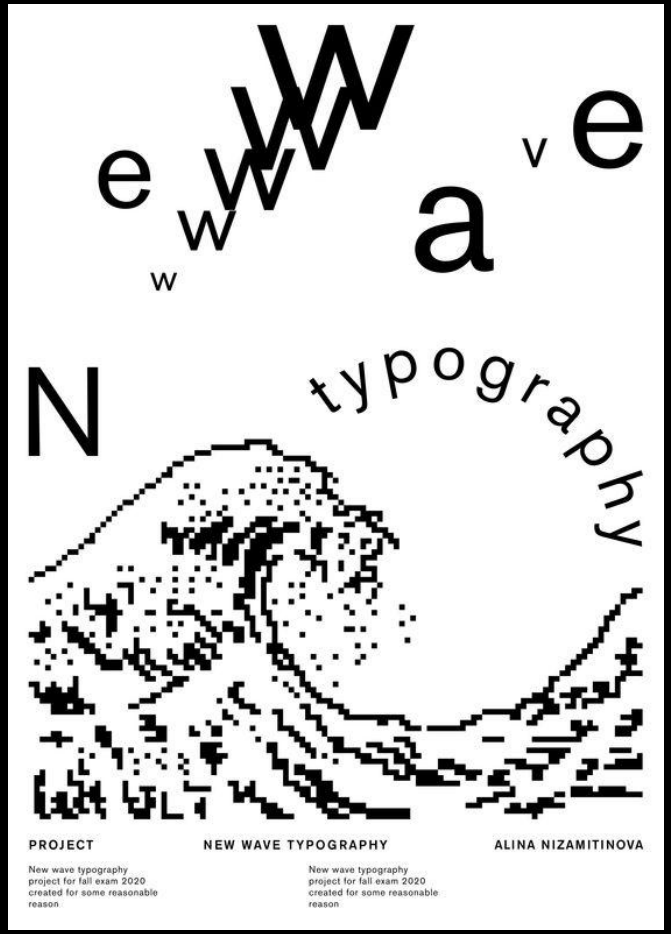
Are pixelated or low quality images bad?

A: Depends on content and context!

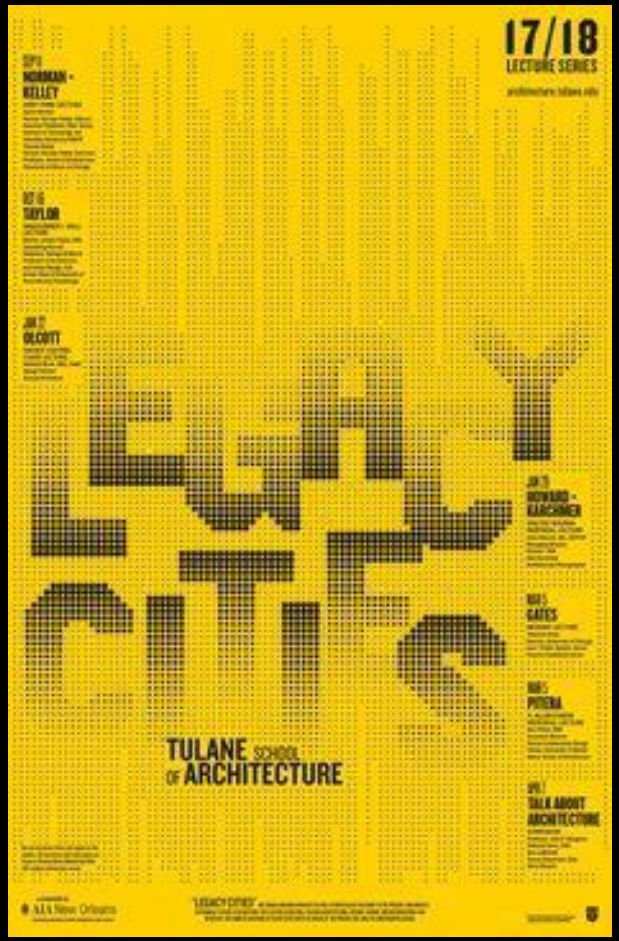
Pixel Art!

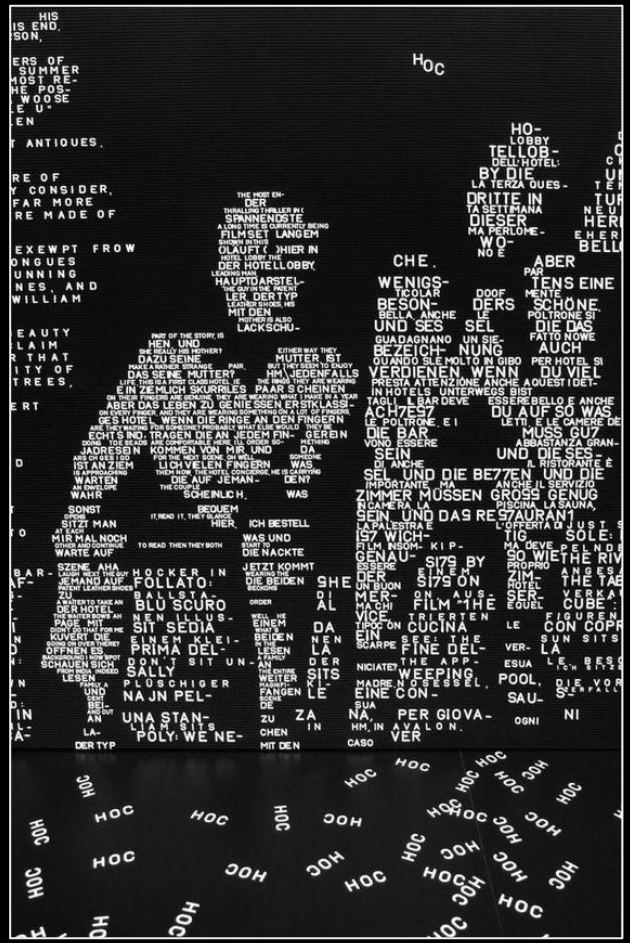

14
Hey, I know what it's like
when it feels like you can't anymore, energy is low
and you suffer from
01
INFINITE
Tension
Waiting all day just to feel something stir inside
Ok but tell me, what do you want?
CALL 1-800-ZED
For *real* body stress release

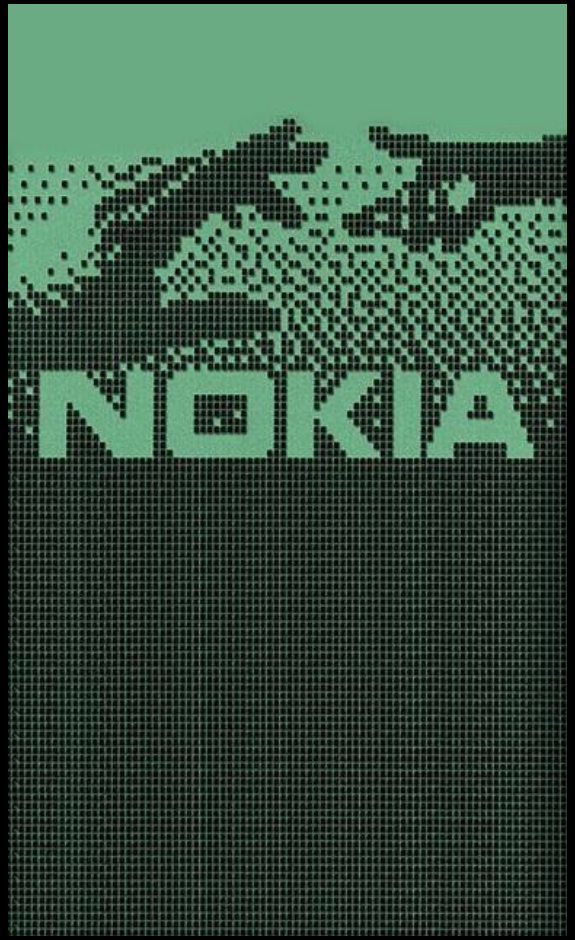
MASATO SAMATA
(DELAWARE)
EXPO


typography
PROJECT
NEW WAVE TYPOGRAPHY
ALINA NIZAMITINOVA
New wave typography project for fall exam 2020 created for some reasonable reason
New wave typography project for fall exam 2020 created for some reasonable reason

스크리닝 시리즈
SCREENING SERIES
#3 예술과 사회
김형주 감독 -
망원동 인공위성
THE BASEMENT
SATELLITE
2014. 5. 29. THU
7:00PM - 9:40PM
씨네코드 선재
서울특별시 종로구
율곡로3길 87
(소격동 144-2)
참여신청:
forumnforum.com
또는
cafe.naver.com
/artsonjearthall
초청좌담:
김형주 감독
한윤형 미디어비평가
강영민 팝아티스트
공동기획:
정림건축문화재단
영화사 진진


17/18
LECTURE SERIES
TULANE SCHOOL OF ARCHITECTURE


HOC

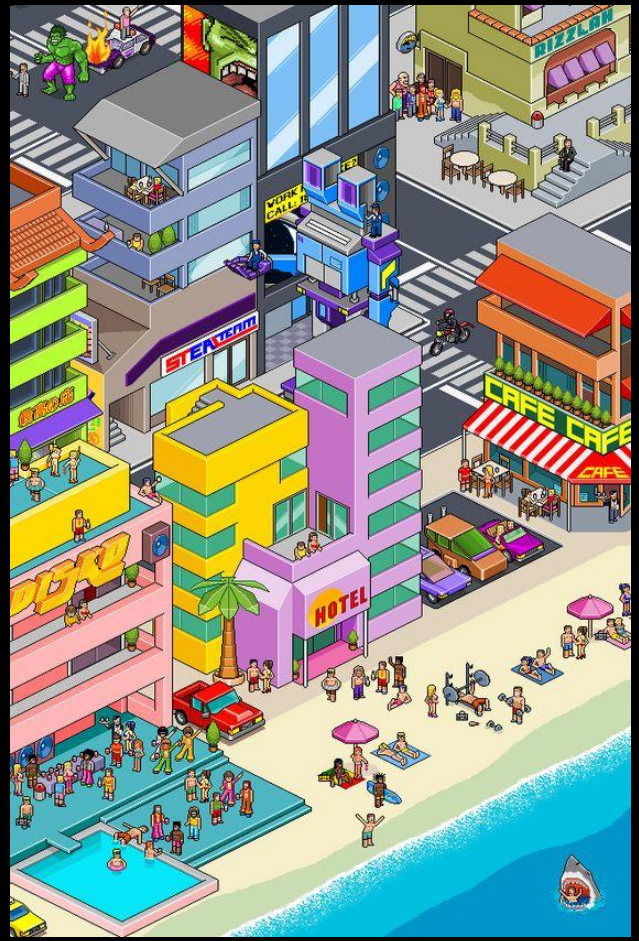

NOKIA

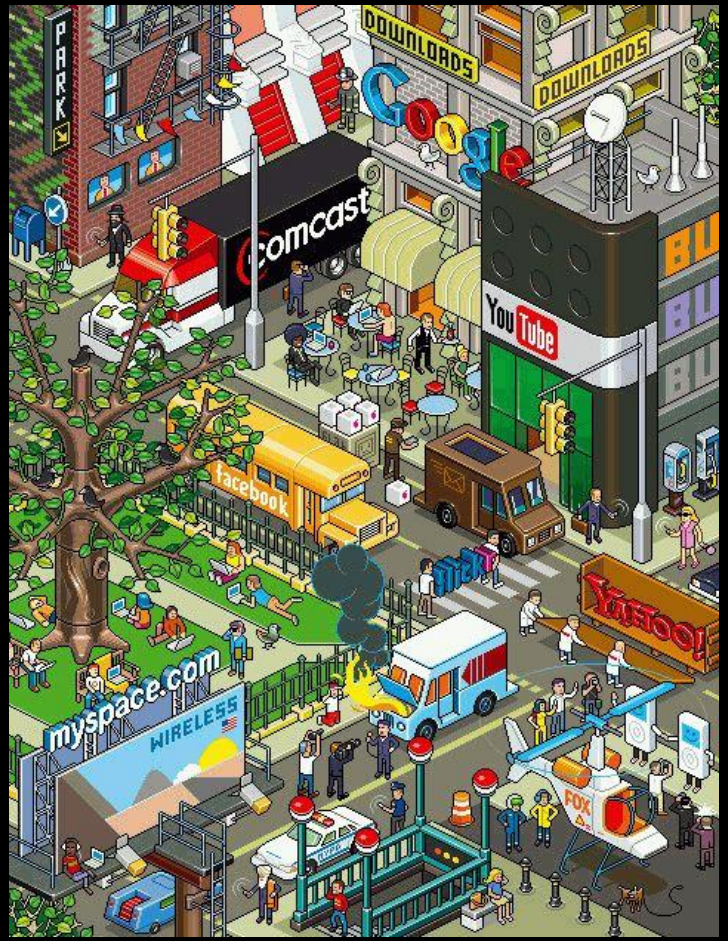
→ DONDERDAG 8 OKTOBER
STUDIO VERHEYDEN
20:00, INLOOP 19:30
stimuleringsfonds creatieve industrie
Arnhem
BIG
DATA
→ ENTREE €8.00
MELD JE VOORAF AAN
VIA O-P-A.NL
→ GRATIS VOOR OPA/BNO MEMBERS
& STUDENTEN RIJN IJSSEL
CREATIEVE INDUSTRIE/HAN IPO
O-P-A.NL

07
06
05
flyHigh.os

KT&G 상상마당
KT&G
상상마당
홍대 갤러리 I
2019. 8. 14.
- 9. 22.
PLASTIC
LOVE
유화수
정혜정
권도연
PRAG-LAB
patagonia
HONEY WRAP
BOTTLE FACTORY
design press

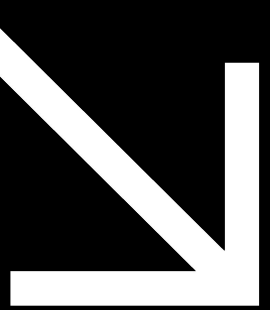
КАФЕ 24
РОСБАНК


RIZZLAN
STEAMTEAM
CAFE CAFE
HOTEL


PARK
DOWNLOADS
DOWNLOADS
Google
Comcast
YouTube
facebook
myspace.com
WIRELESS
YAHOO!
FOX

Let's Discuss:

Screen Sizes & Aspect Ratio? (in Pixels)



Aspect ratios

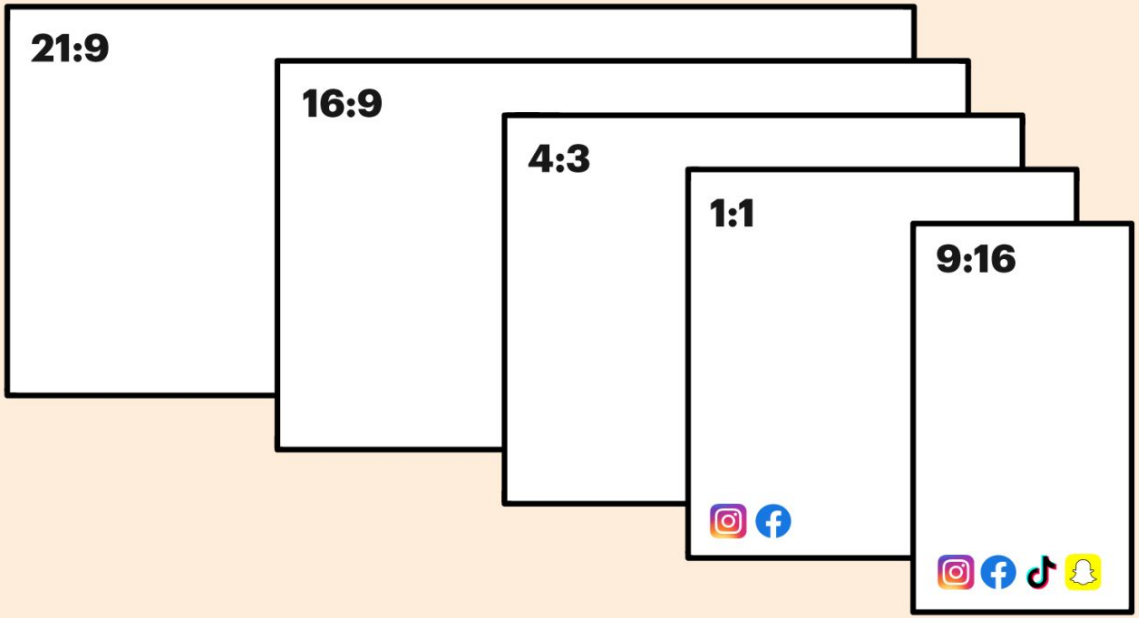
21:9
Ultra-widescreen films used to create a 360-degree effect use the 21:9 aspect ratio.

16:9
For online videos, modern TVs, and movie theaters.

4:3
For film and was supported on box TVs and computer monitors until HD came along.

1:1
For social media platforms such as Facebook and Instagram.

9:16
This aspect ratio became popular when you could start shooting video with a smartphone.



Restream

Width

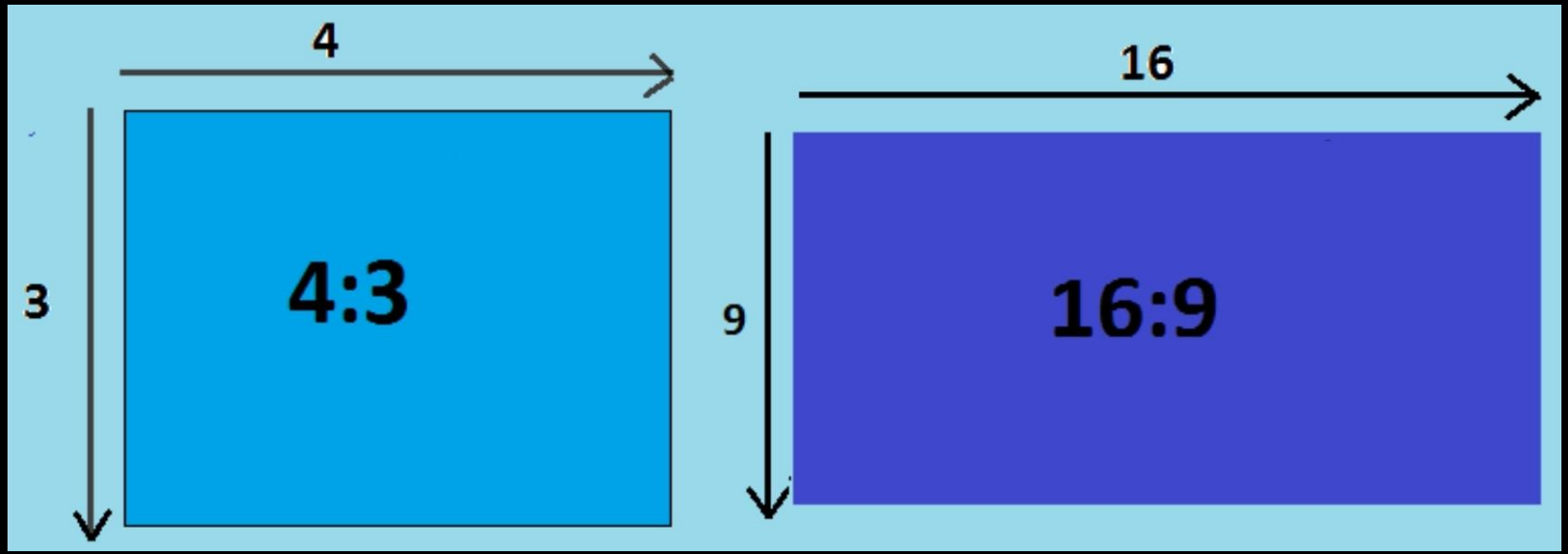
Window Size Classes

Compact

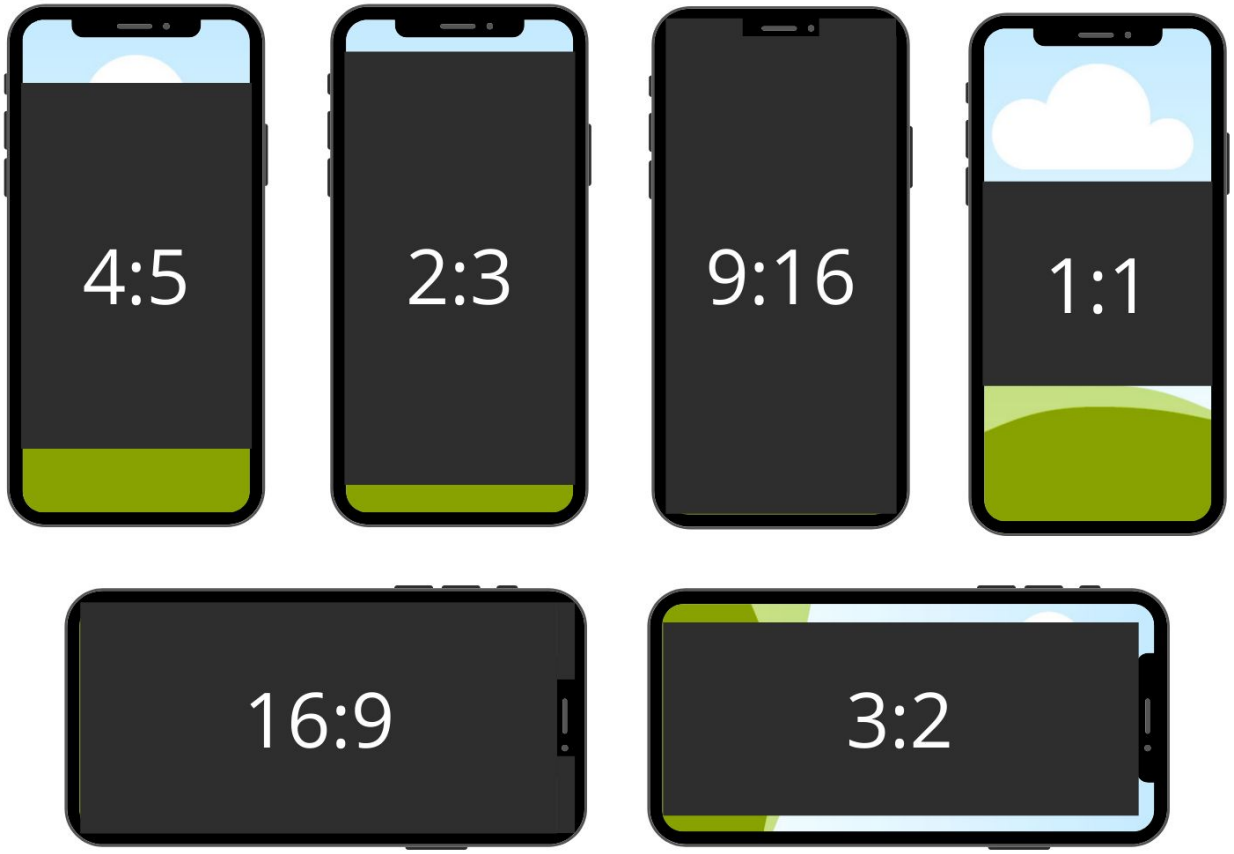
Medium

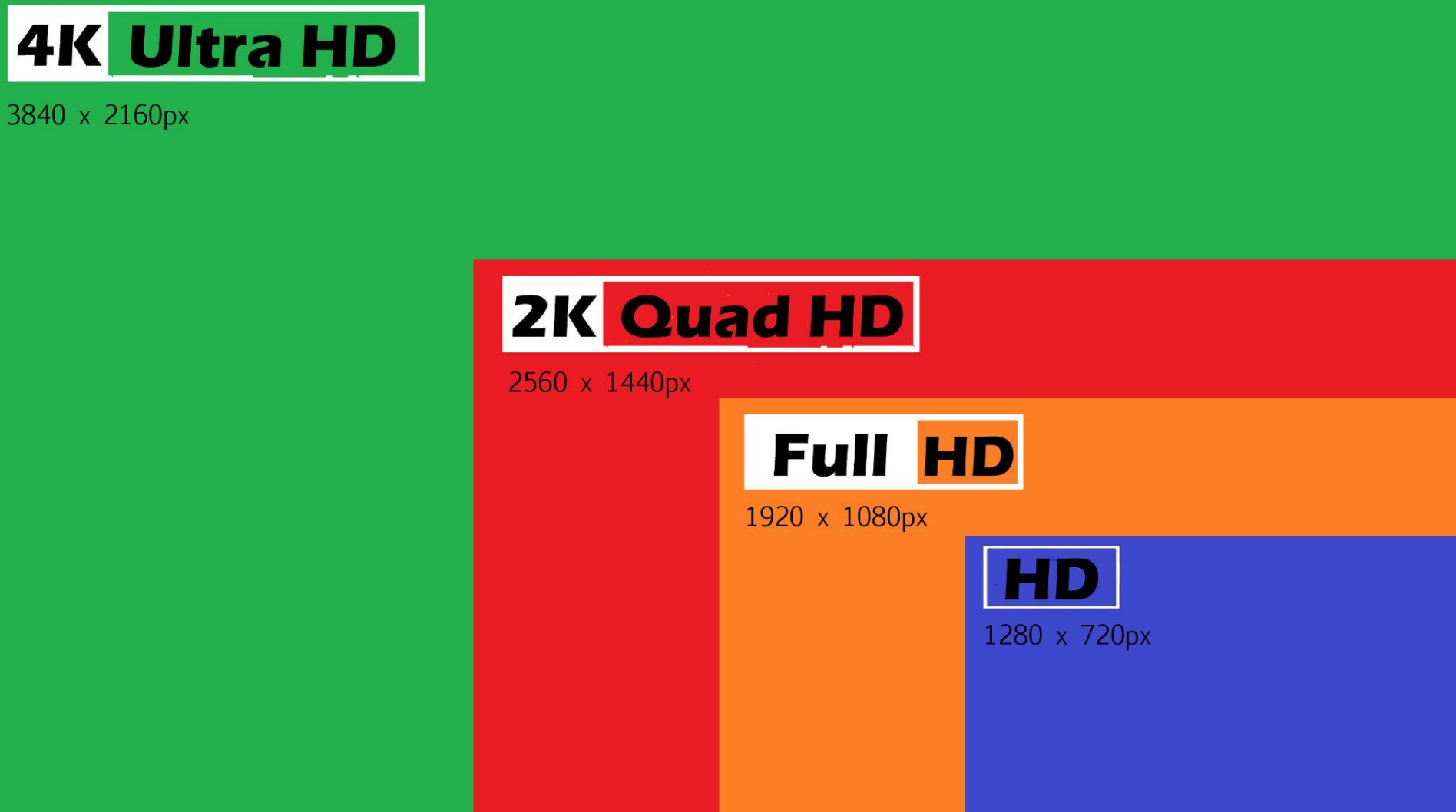
Expanded

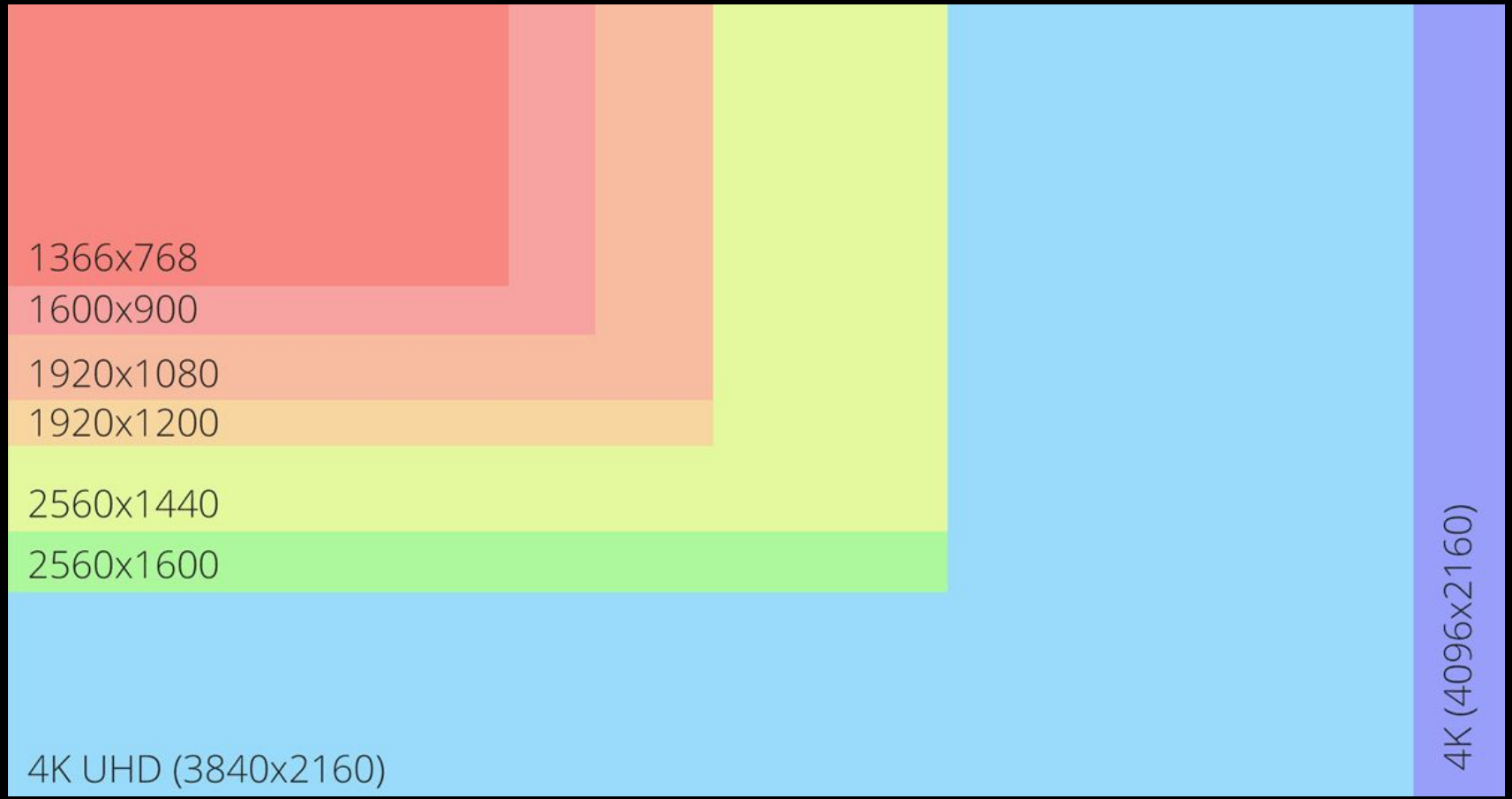
600 dp — 840 dp

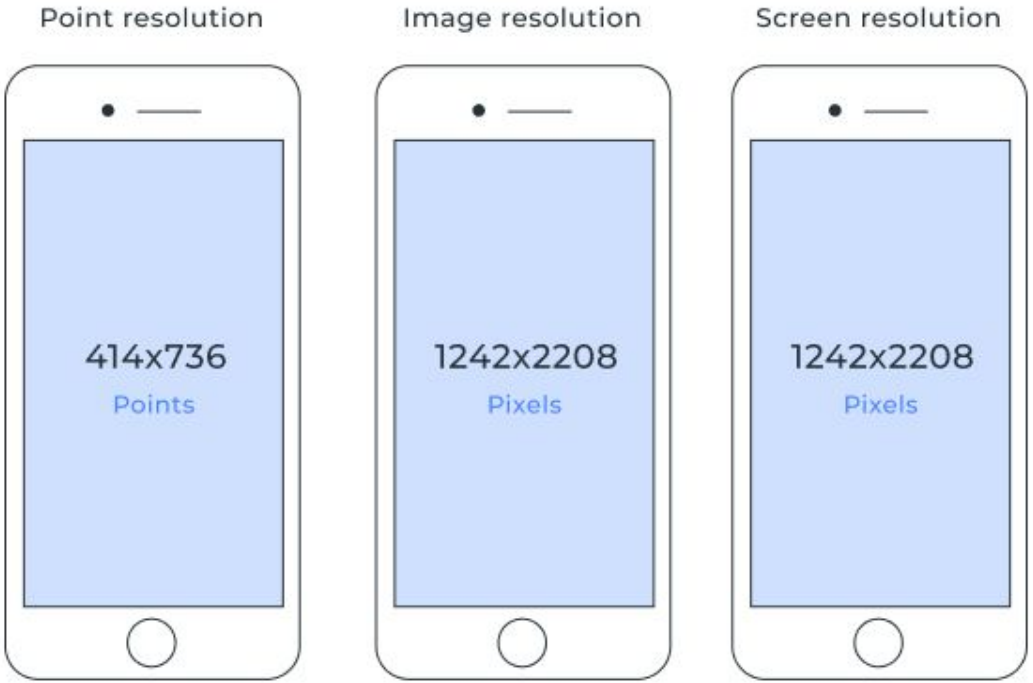

4
3
4:3
16
9
16:9

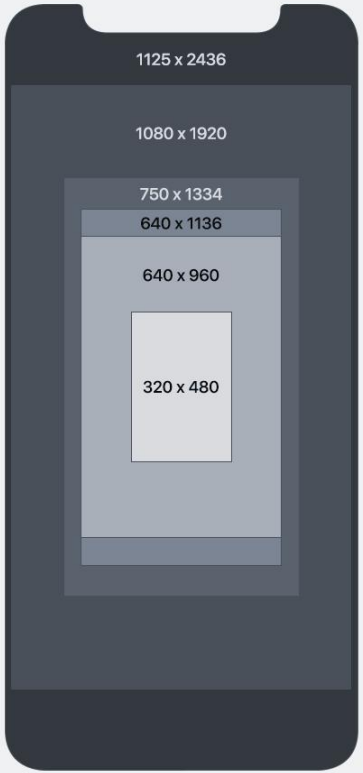
18:9
18.5:9
17:9
16:9
LG G6
5.74"
Galaxy S8
5.7"
5.8" (full rectangle)
Galaxy S8+
6.1"
6.2" (full rectangle)
08:16
iPhone 7 Plus
5.5"


4:5
2:3
9:16
1:1
16:9
3:2


4K Ultra HD
3840 x 2160px
2K Quad HD
2560 x 1440px
Full HD
1920 x 1080px
HD
1280 x 720px


1366x768
1600x900
1920x1080
1920x1200
2560x1440
2560x1600
4K UHD (3840x2160)
4K (4096x2160)


Point resolution
414x736
Points
Image resolution
1242x2208
Pixels
Screen resolution
1242x2208
Pixels



iPhone X

iPhone 8, 7, 6s, 6 Plus

iPhone 8, 7, 6s, 6

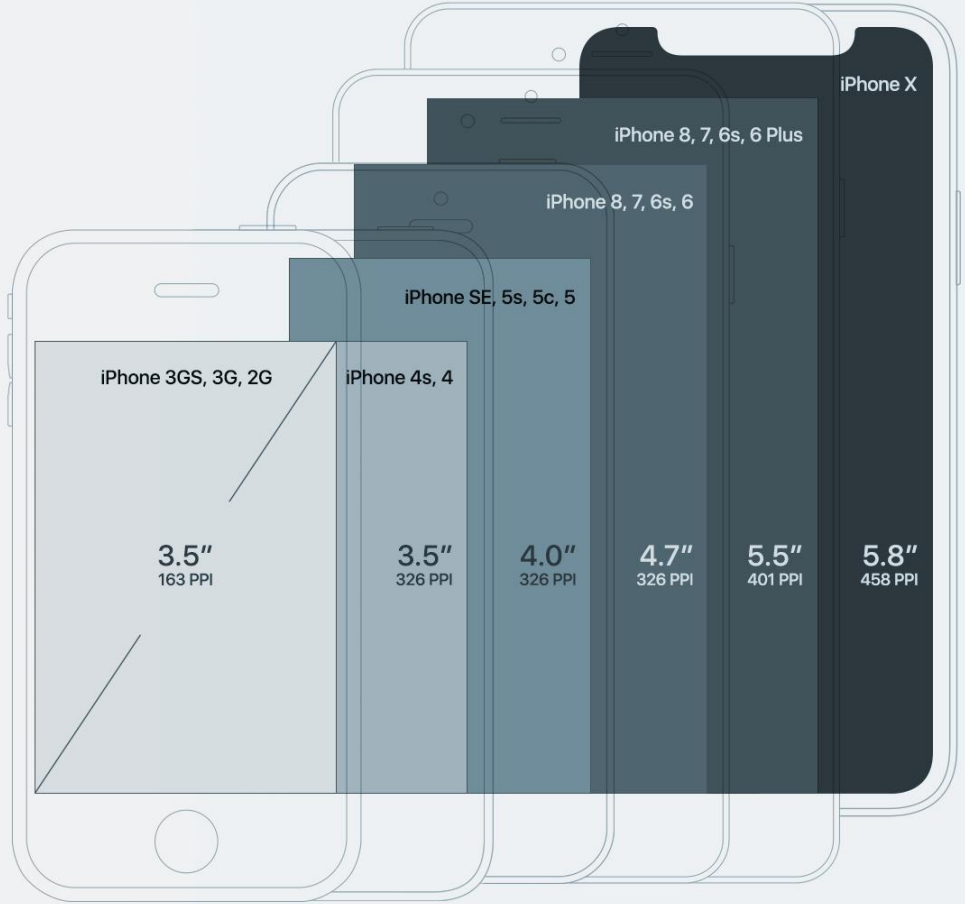
iPhone SE, 5s, 5c, 5

iPhone 4s, 4

iPhone 3GS, 3G, 2G

iPhone

◀ Screen Resolution | Size ▶
Through the Years



GEEKCOSMOS
www.geekcosmos.com

Vector

Used for:

- Logos
- Icons
- Charts
- Illustrations

File formats:

- .svg
- .eps
- .ai
- .pdf

Bitmap (Raster)

Used for:

- Photography
- Collages
- Pixel based Imagery

File formats:

- .jpg / .jpeg
- .png
- .gif
- .tif
- .bmp
- .psd

File Types

.DOC
.JPG
.PNG
.PSD
.EPS
.CDR
.TXT
.GIF
.PPT
.MP3
.WAV
.AI
.MOV
.EXE
.DMG
.RAR
.ZIP
.PDF

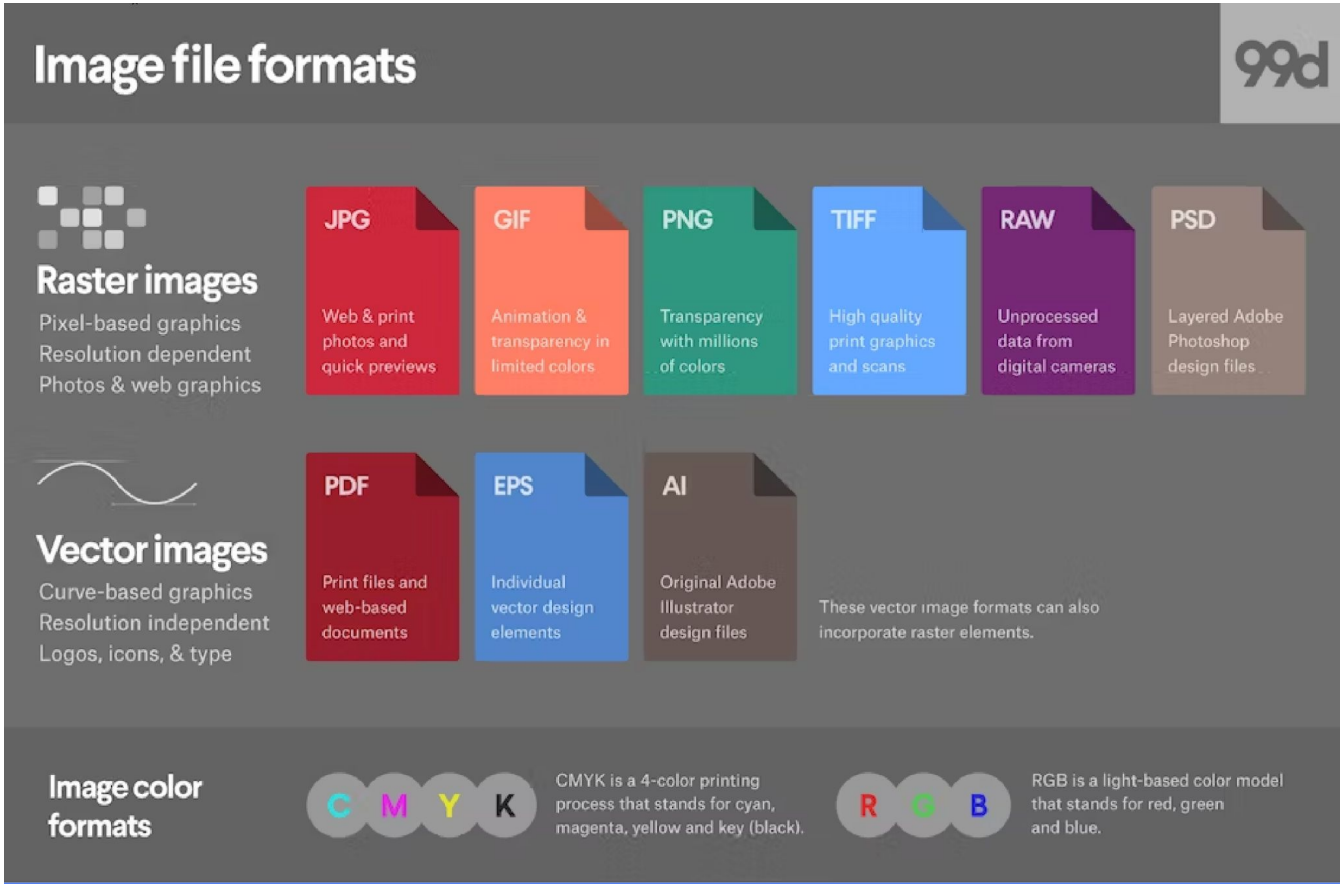
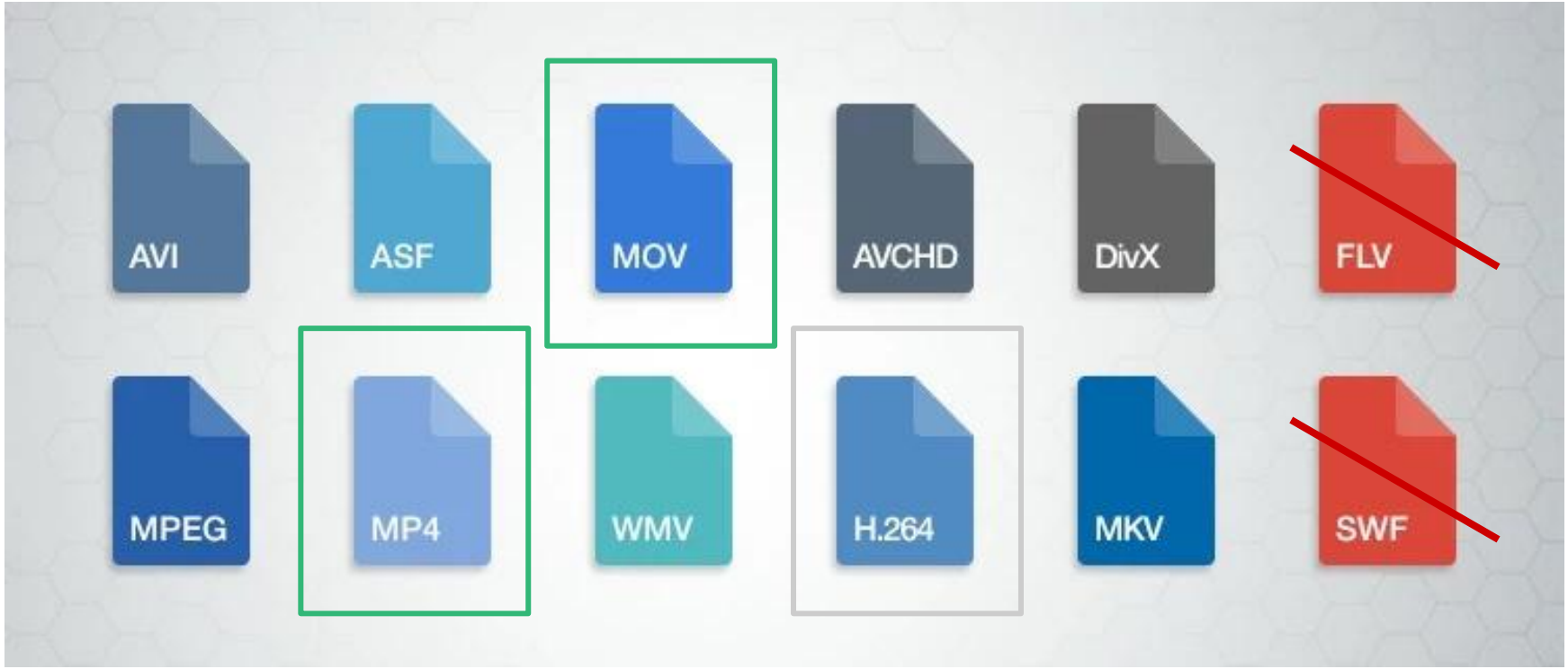
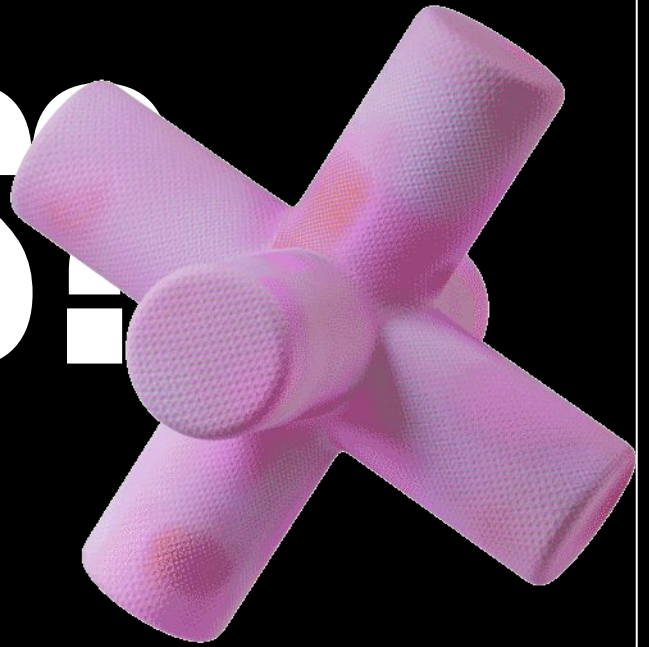


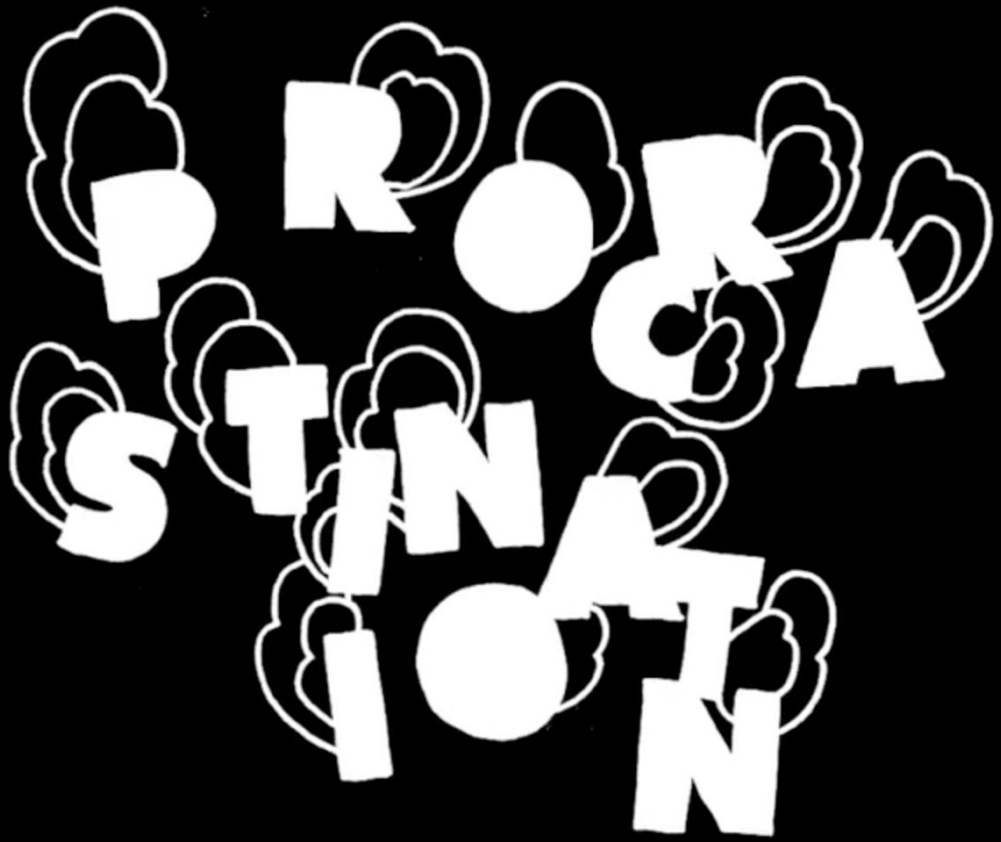
Image file formats
99d
Raster images
Pixel-based graphics
Resolution dependent
Photos & web graphics
JPG
Web & print photos and quick previews
GIF
Animation & transparency in limited colors
PNG
Transparency with millions of colors
TIFF
High quality print graphics and scans
RAW
Unprocessed data from digital cameras
PSD
Layered Adobe Photoshop design files
Vector images
Curve-based graphics
Resolution independent
Logos, icons, & type
PDF
Print files and web-based documents
EPS
Individual vector design elements
AI
Original Adobe Illustrator design files
These vector image formats can also incorporate raster elements.
Image color formats
C M Y K
CMYK is a 4-color printing process that stands for cyan, magenta, yellow and key (black).
R G B
RGB is a light-based color model that stands for red, green and blue.

VIDEO FORMAT


AVI
ASF
MOV
AVCHD
DivX
FLV
MPEG
MP4
WMV
H.264
MKV
SWF

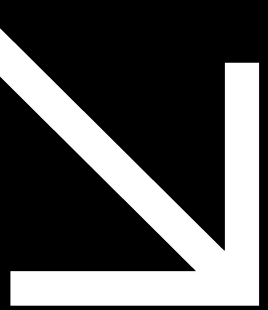
ANY QUESTIONS?




PROCRASTINATION
00:08

Homework Review

Your Homework for next week!



Homework:

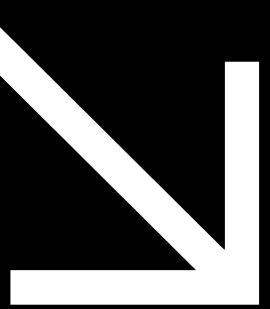
Design your poster!

With the feedback you got in class, take your sketches to the next level and start adding: colors, typefaces, image-making (your style!) try as many iterations as possible and bring your designs for next class (digitally only)

Continue with:

1. **Sketches to Design**
2. **Move to a software (illustrator, figma, photoshop, etc)**
3. **Create as many options as possible and present in class for feedback next class.**

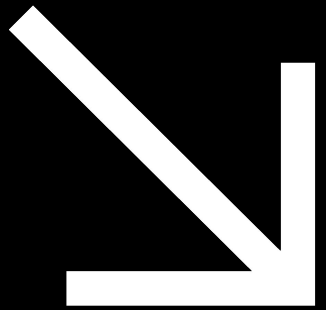
Present next class for feedback



Homework:

Extra fun stuff before next class (Color theory):

1. this article
2. this quiz
3. this video
4. https://graf1x.com/product/color-theory-poster/



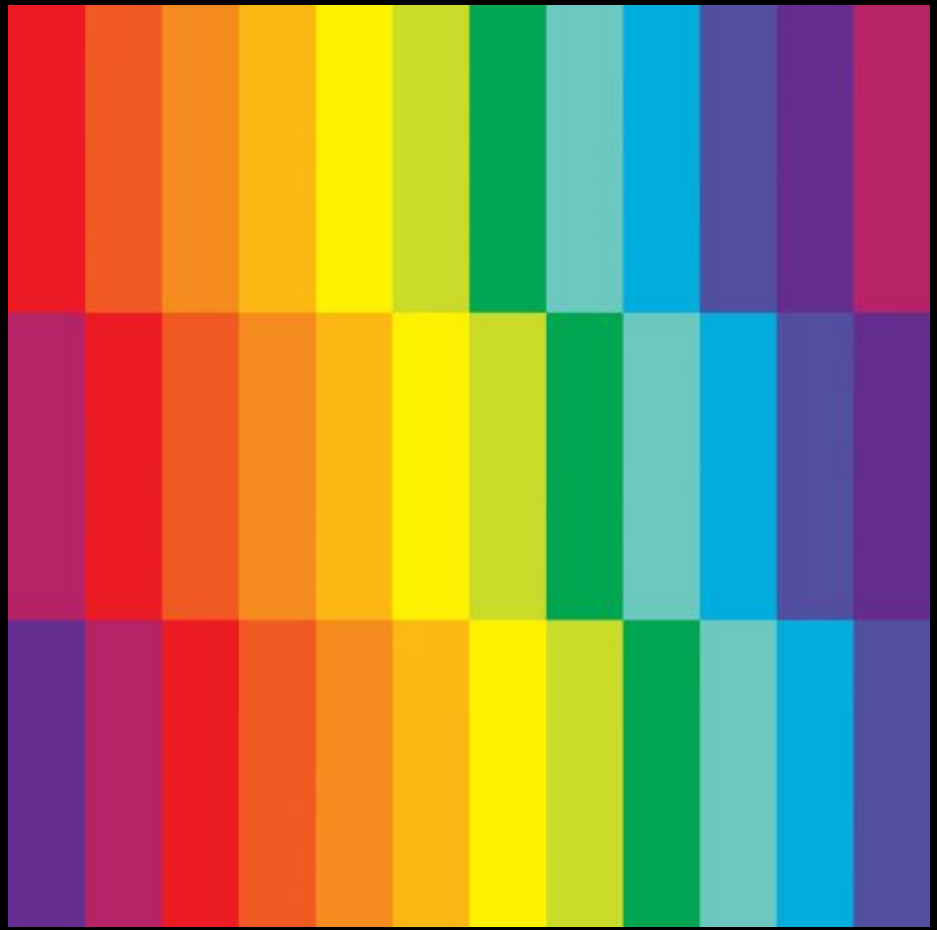
1 **Research** & Discovery	6 User **Testing** & **Feedback**
2 **Ideation** & **Brainstorming**	7 **Refinement**
3 **Concept** Development	8 **Finalization**
4 **Prototyping** & **Wireframing**	9 **Presentation** & **Communication**
5 **Design** Development	10 **Delivery**, **Implementation** & **Evaluation**

Which Image-making style will you choose?

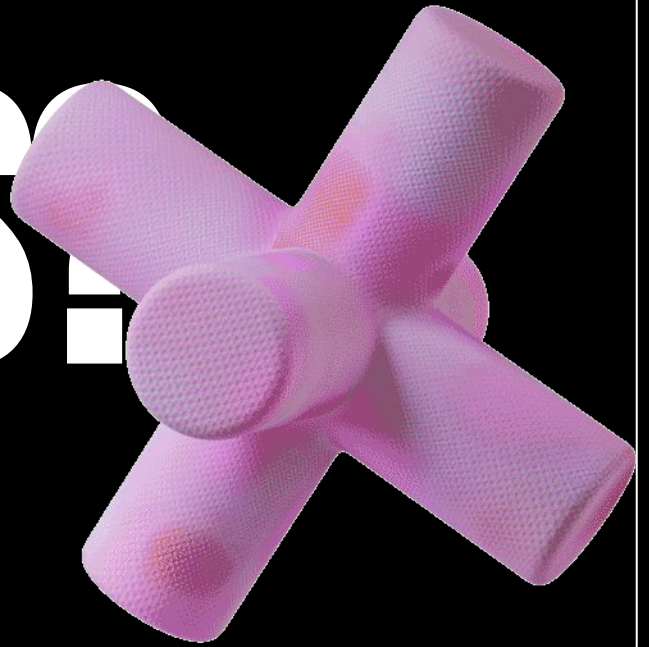
Try as many as you can!
+ this is your chance to learn something new and get out of your comfort zone!

Next Week:

Color Theory!



ANY QUESTIONS?



THANK YOU!